



# **STIC Search Report**

## **Biotech-Chem Library**

STIC Database Tracking Number: 173943

**TO: Jegatheesan Seharaseyon**  
**Location: rem/4C61/4C70**  
**Art Unit: 1647**  
**Thursday, December 15, 2005**

**Case Serial Number: 10/691653**

**From: Alex Waclawiw**  
**Location: Biotech-Chem Library**  
**Rem 1A71**  
**Phone: 272-2534**

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### **Search Notes**

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CC antidepressant and neuroleptic. The zinf2 polypeptide is useful for  
CC treating autoimmune diseases, cancers, multiple sclerosis,  
CC arteriosclerosis, retinopathy, viral infections, tumours,  
CC lymphoproliferative disorders (e.g. B-cell lymphoma, chronic lymphatic  
CC leukemia or acute lymphatic leukemia), myocarditis, or disorders of the  
CC central nervous system including anxiety, depression, schizophrenia,  
CC Parkinson's disease, Huntington's disease, Alzheimer's disease. zinf2 can  
CC also be used to promote and protect growth of the fetus, and promote in  
CC vitro fertilization. Nucleic acids can be used to detect expression of a  
CC zinf2 gene in a biological sample or to determine whether a subject's  
CC chromosomes contain a mutation in the zinf2 gene. zinf2 probes and  
CC primers can be used to detect and to localise zinf2 gene expression in  
CC tissue samples. Anti-zinf2 antibodies can be used to detect zinf2  
CC protein. The current sequence represents human interferon amino acid  
CC sequence INAG  
CC  
XX  
SQ Sequence 189 AA;  
  
Query Match 100.0%; Score 961; DB 5; Length 189;  
Best Local Similarity 100.0%; Pred. No. 9,3e-84;  
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
QY 1 MALSFSLMAVLVLSYKSGICGLDLPOTHSIGNRRALILAQMGRISPFSCLXDRHDFG 60  
DB 1 MALSFSLMAVLVLSYKSGICGLDLPOTHSIGNRRALILAQMGRISPFSCLXDRHDFG 60  
QY 61 LPOEFPDGNQFOKTOAISVLHEMIQOTFNLFSTEDSSAAMEQSILLEKSTELYQQLNMLE 120  
DB 61 LPOEFPDGNQFOKTOAISVLHEMIQOTFNLFSTEDSSAAMEQSILLEKSTELYQQLNMLE 120  
QY 121 ACVIOEVMGEETPLMNEDSLIAVRKYFORITLYLTEKKYSCAMEVVRAEIMRSLSFSTN 180  
DB 121 ACVIOEVMGEETPLMNEDSLIAVRKYFORITLYLTEKKYSCAMEVVRAEIMRSLSFSTN 180  
QY 181 LQKILRRKD 189  
DB 181 LQKILRRKD 189  
  
RESULT 2  
AAE14830  
ID AAE14830 standard; protein; 189 AA.  
XX  
AC AAE14830;  
XX  
DT 24-MAR-2003 (first entry)  
XX  
DE Human wild-type interferon (IFN) alpha-17 precursor protein.  
XX  
KW Human; interferon alpha-17; IFNalpha-17; single nucleotide polymorphism;  
KW SNP; cancer; tumour; chronic myeloid leukaemia; infectious disease;  
KW viral infection; chronic hepatitis; acquired immune deficiency syndrome;  
KW AIDS; immune disorder; autoimmune disorder; allergy; obesity;  
KW rheumatoid arthritis; cardiovascular disease; metabolic;  
KW central nervous system disorder; CNS disorder; Alzheimer's disease;  
KW Parkinson's disease; chemotherapy treatment related disorder; wound;  
KW anaemia; osteoporosis.  
XX  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT Peptide 1..23  
FT /label= Signal\_peptide  
FT Protein 24..189  
FT /label= Mature\_IFNalpha-17  
XX  
FN WO200286156-A2.  
XX  
PD 31-OCT-2002.  
XX  
PF 23-APR-2002; 2002WO-EP005229.  
XX  
PR 24-APR-2001; 2001FR-00005516.

XX  
PA (GENO-) GENODYSSE.  
XX  
FI Escary J;  
XX  
DR WP1; 2003-093152/08.  
XX  
DR N-PSDB; AAD36837.  
XX  
PT Novel isolated polynucleotide useful for identifying or amplifying  
PT polynucleotide, for analyzing biological characteristics of subject, and  
PT for preventing or treating cancer, metabolic and cardiovascular diseases.  
XX  
PS Claim 14; Page 63; 64pp; English.  
XX  
CC The invention relates to polynucleotide and polypeptide variants derived  
CC from human interferon (IFN) alpha-17 gene which comprises at least one  
CC single nucleotide polymorphism (SNP) selected from G771C and 8081ins(A)  
CC (insertion of base A at position 808). The IFNalpha-17 polynucleotide and  
CC polypeptide variants resulting due to SNP in the gene, or mimetic  
CC compounds having similar activity as the variants are used for preparing  
CC therapeutic agents for preventing or treating diseases such as cancers  
CC and tumours (e.g. chronic myeloid leukaemia, metastizing renal carcinoma),  
CC infectious diseases (e.g. viral infections including chronic hepatitis B  
CC and C, human immunodeficiency virus (HIV)/acquired immune deficiency  
CC syndrome (AIDS), infectious pneumonias, and venereal diseases such as  
CC genital warts), immunologically or autoimmunologically related diseases  
CC (e.g. rejection of tissue or organ grafts, allergies, asthma, psoriasis,  
CC rheumatoid arthritis, multiple sclerosis, Crohn's disease and ulcerative  
CC colitis), cardiovascular diseases, metabolic diseases (e.g. obesity),  
CC central nervous system (CNS) disorders (e.g. Alzheimer's disease,  
CC Parkinson's disease, schizophrenia, depression) and disorders connected  
CC with chemotherapy treatments. The therapeutic agents are also useful for  
CC preventing or treating wounds, anaemia in dialysed patient, and  
CC osteoporosis in an individual. The present sequence is human wild-type  
CC interferon (IFN) alpha-17 protein  
XX  
SQ Sequence 189 AA;  
  
Query Match 100.0%; Score 961; DB 6; Length 189;  
Best Local Similarity 100.0%; Pred. No. 9,3e-84;  
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
QY 1 MALSFSLMAVLVLSYKSGICGLDLPOTHSIGNRRALILAQMGRISPFSCLXDRHDFG 60  
DB 1 MALSFSLMAVLVLSYKSGICGLDLPOTHSIGNRRALILAQMGRISPFSCLXDRHDFG 60  
QY 61 LPOEFPDGNQFOKTOAISVLHEMIQOTFNLFSTEDSSAAMEQSILLEKSTELYQQLNMLE 120  
DB 61 LPOEFPDGNQFOKTOAISVLHEMIQOTFNLFSTEDSSAAMEQSILLEKSTELYQQLNMLE 120  
QY 121 ACVIOEVMGEETPLMNEDSLIAVRKYFORITLYLTEKKYSCAMEVVRAEIMRSLSFSTN 180  
DB 121 ACVIOEVMGEETPLMNEDSLIAVRKYFORITLYLTEKKYSCAMEVVRAEIMRSLSFSTN 180  
QY 181 LQKILRRKD 189  
DB 181 LQKILRRKD 189  
  
RESULT 3  
ADM13719  
ID ADM13719 standard; protein; 189 AA.  
XX  
AC ADM13719;  
XX  
DT 20-MAY-2004 (first entry)  
XX  
DE Human interferon-alpha type 1 protein.  
XX  
KW Interferon; IFN; Alzheimer's disease; Down syndrome; infant encephalitis;  
KW autoimmune disease; HIV; AIDS-associated dementia; lupus erythematosus;  
KW ulcerative colitis; Hashimoto's disease; amyotrophic lateral sclerosis;  
KW Goodpasture's syndrome; therapy; acquired immunodeficiency syndrome;

KM AIDS; human.  
XX Homo sapiens.  
OS US2003138404-A1.  
XX  
XX 24-JUL-2003.  
XX  
XX 31-OCT-2002; 2002US-00284740.  
XX  
XX 14-JUL-1995; 95US-00502519.  
XX 28-APR-1998; 98US-00067398.  
XX 30-APR-2001; 2001US-00845260.  
XX  
XX (MEIO-) MEIOGEN BIOTECHNOLOGY CORP.  
XX Maroun LE;  
XX WPI; 2003-829690/77.  
XX N-PSDB; ADM13720.  
XX GEMBANK; M11026.  
XX  
XX Composition for preventing or decreasing pathological effects of disease  
XX that are associated with increased level of or heightened responsiveness  
XX to interferon, comprises at least two isolated interferon binding  
XX proteins.  
XX  
XX Disclosure; Fig 7A; 38pp; English.  
XX  
XX The present invention provides composition for preventing or decreasing  
XX pathological effects of a disease that are associated with an increased  
XX level of or a heightened responsiveness to interferon (IFN) where the  
XX composition inhibits the activity of one or more IFN. The invention is  
XX useful for treating diseases such as Alzheimer's disease, Down syndrome,  
XX infant encephalitis, autoimmune diseases such as lupus erythematosus,  
XX ulcerative colitis, Hashimoto's disease, amyotrophic lateral sclerosis  
XX and Goodpasture's syndrome and HIV where the administration of the  
XX antagonist prevents or ameliorates AIDS (acquired immunodeficiency  
XX syndrome)-associated dementia. The present sequence is human interferon-  
XX alpha type 1 protein.  
XX  
XX Sequence 189 AA;  
SQ  
Query Match 100.0%; Score 961; DB 7; Length 189;  
Best Local Similarity 100.0%; Pred. No. 9.3e-84;  
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MALSFSILMAVLVSYKISCSIGCDLPQTHSLGNRRALILLAQWGRISPFSCLDKRDHFG 60  
DB 1 MALSFSILMAVLVSYKISCSIGCDLPQTHSLGNRRALILLAQWGRISPFSCLDKRDHFG 60  
QY 61 LPOEFPDGNQFOKTOAISVLHEMIQOTFNLFSTEDSSAAWQSLLEKSTELVQOLNNLE 120  
DB 61 LPOEFPDGNQFOKTOAISVLHEMIQOTFNLFSTEDSSAAWQSLLEKSTELVQOLNNLE 120  
QY 121 ACVQIEVGMETPLMNEDSLAVRKYFORITLVTTEKYSPCAMEVVAEIMRSLSTSTN 180  
DB 121 ACVQIEVGMETPLMNEDSLAVRKYFORITLVTTEKYSPCAMEVVAEIMRSLSTSTN 180  
QY 181 LQKILRRKD 189  
DB 181 LQKILRRKD 189  
XX  
XX ADN10812 standard; protein; 189 AA.  
XX ADN10812;  
XX AC  
XX ADN10812;  
XX 01-JUL-2004 (first entry)  
XX  
XX Human interferon-alpha 17.  
DE

XX  
XX Human; interferon-alpha 17; protein engineering; virucide;  
XX immunosuppressive; cytostatic; antiinflammatory.  
XX Homo sapiens.  
XX WO2004031352-A2.  
XX  
XX 15-APR-2004.  
XX  
XX 30-SEP-2003; 2003WO-US030802.  
XX  
XX 01-OCT-2002; 2002US-0415541P.  
XX 10-JUN-2003; 2003US-0477246P.  
XX 24-JUL-2003; 2003US-0489725P.  
XX  
XX (XENC-) XENCOR.  
XX  
XX Aginaldo AM, Belya AJ, Desjarlais JR, Marshall SA, Muchhal U;  
XX Villegas MFA, Zhukovsky E, Cho HS;  
XX WPI; 2004-330165/30.  
XX GEMBANK; 10880985.  
XX  
XX New variant type I interferon protein exhibiting improved solubility  
XX relative to a wild type interferon protein, useful for treating  
XX autoimmune diseases, viral infections, inflammatory diseases or cancer.  
XX  
XX Claim 1; SEQ ID NO 13; 75pp; English.  
XX  
XX The present sequence is that of human interferon-alpha 17. The invention  
XX relates to interferon variants with improved properties, such as  
XX increased solubility, increased specific activity and decreased  
XX immunogenicity. Various strategies may be used to design such variants,  
XX including substituting solvent-exposed hydrophobic residues with polar  
XX residues, modifying residues that affect the isoelectric point of the  
XX protein, and reducing the occurrence of unwanted protein-protein  
XX interactions by modifying residues located at a dimer interface. Variant  
XX type I interferon proteins ADN10818-ADN10829 that exhibit improved  
XX solubility relative to wild-type interferons ADN10800-ADN10817 are  
XX claimed. The variants maintain the immunomodulatory, antiviral and/or  
XX antineoplastic activities of the native protein. They differ from the  
XX native interferon by at least one substitution of a solvent-exposed  
XX hydrophobic residue. The variants can be obtained by recombinant  
XX expression in host cells. They are useful for treating autoimmune  
XX diseases, viral infections, inflammatory diseases or cancer. Wild-type  
XX interferons, including the present sequence, are used in a claimed method  
XX of inhibiting interferon dimer formation.  
XX  
XX Sequence 189 AA;  
SQ  
Query Match 100.0%; Score 961; DB 8; Length 189;  
Best Local Similarity 100.0%; Pred. No. 9.3e-84;  
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MALSFSILMAVLVSYKISCSIGCDLPQTHSLGNRRALILLAQWGRISPFSCLDKRDHFG 60  
DB 1 MALSFSILMAVLVSYKISCSIGCDLPQTHSLGNRRALILLAQWGRISPFSCLDKRDHFG 60  
QY 61 LPOEFPDGNQFOKTOAISVLHEMIQOTFNLFSTEDSSAAWQSLLEKSTELVQOLNNLE 120  
DB 61 LPOEFPDGNQFOKTOAISVLHEMIQOTFNLFSTEDSSAAWQSLLEKSTELVQOLNNLE 120  
QY 121 ACVQIEVGMETPLMNEDSLAVRKYFORITLVTTEKYSPCAMEVVAEIMRSLSTSTN 180  
DB 121 ACVQIEVGMETPLMNEDSLAVRKYFORITLVTTEKYSPCAMEVVAEIMRSLSTSTN 180  
QY 181 LQKILRRKD 189  
DB 181 LQKILRRKD 189  
XX  
XX ADN10812 standard; protein; 189 AA.  
XX ADN10812;  
XX AC  
XX ADN10812;  
XX 01-JUL-2004 (first entry)  
XX  
XX Human interferon-alpha 17.  
DE

ADSL6322  
ID ADSL6322 standard; protein; 189 AA.  
XX  
AC ADSL6322;  
XX  
DT 02-DEC-2004 (first entry)  
XX  
DE Human interferon (IFN) alpha 17 protein.  
XX  
KW Interferon; IFN; antiviral; antineoplastic; immunomodulator;  
KW IFN related disorder; autoimmune disease; multiple sclerosis;  
KW diabetes mellitus; lupus erythematosus; Crohn's disease; asthma; allergy;  
KW psoriasis; viral infection; hepatitis C; hepatitis B; viral encephalitis;  
KW cell proliferation disease; cancer; osteosarcoma; basal cell carcinoma;  
KW multiple myeloma; chronic lymphocytic leukemia; Kaposi's sarcoma;  
KW renal-cell carcinoma; ovarian cancer; hairy-cell leukemia;  
KW Hodgkin's disease; gene therapy; human; IFN alpha 17.  
XX  
OS Homo sapiens.  
XX  
PN US2004175359-A1.  
XX  
PD 09-SEP-2004.  
XX  
PF 30-SEP-2003; 2003US-00677093.  
XX  
PR 12-NOV-2002; 2002US-0425851P.  
XX  
PA (DESF/) DESJARLAIS J R.  
PA (MARS/) MARSHALL S A.  
PA (MOY/) MO Y.  
PA (THOM/) THOMASON A R.  
XX  
PI Desjarlais JR, Marshall SA, Mo Y, Thomason AR;  
XX  
DR WPI; 2004-642104/62.  
DR GENBANK; 10880985.  
XX  
PT Novel type 1 interferon (IFN) having antiviral, antineoplastic or  
PT immunomodulatory activity same as wild-type IFN, and being circularly  
PT permuted or cyclized to provide modulated characteristics, useful for  
PT treating IFN related diseases.  
XX  
PS Disclosure; SEQ ID NO 13; 48pp; English.  
XX  
CC The present invention relates to a type 1 interferon (IFN) comprising  
CC antiviral, antineoplastic and immunomodulatory activity similar to a  
CC naturally occurring IFN and has been circularly permuted or cyclised and  
CC has at least one modulated characteristic as compared to the naturally  
CC occurring IFN. The invention is useful for treating IFN related disorder  
CC which includes autoimmune diseases such as multiple sclerosis, diabetes  
CC mellitus, lupus erythematosus, Crohn's disease, asthma, allergies and  
CC psoriasis, viral infections such as hepatitis C, hepatitis B and viral  
CC encephalitis and cell proliferation diseases or cancer such as  
CC osteosarcoma, basal cell carcinoma, multiple myeloma, chronic lymphocytic  
CC leukaemia, Kaposi's sarcoma, renal-cell carcinoma, ovarian cancer, hairy-  
CC cell leukemia and Hodgkin's disease. The invention is also useful in  
CC gene therapy. The present sequence is human interferon (IFN) protein.  
XX  
SQ Sequence 189 AA;  
Query Match 100.0%; Score 961; DB 8; Length 189;  
Best Local Similarity 100.0%; Pred. No. 9,3e-84; Indels 0; Gaps 0;  
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MALSFSLMAVLVLSYKSGICSDLPQTHSIGNRRLAILLAQWGRISPFSLCDNRHFG 60  
DB 1 MALSFSLMAVLVLSYKSGICSDLPQTHSIGNRRLAILLAQWGRISPFSLCDNRHFG 60  
QY 61 LPOEFDFDNGFOKTOAIVLHMIQOTFNLSSTEDSSAAWQSILIEKSTELVQQLNLE 120  
DB 61 LPOEFDFDNGFOKTOAIVLHMIQOTFNLSSTEDSSAAWQSILIEKSTELVQQLNLE 120

QY 121 ACVIOEVMETPLMNEDSLAAVRKYFORITLVYTEKKYSPCAWEVVRAEIMRSLSFSTN 180  
DB 121 ACVIOEVMETPLMNEDSLAAVRKYFORITLVYTEKKYSPCAWEVVRAEIMRSLSFSTN 180  
QY 181 LQKILRRKD 189  
DB 181 LQKILRRKD 189  
RESULT 6  
ADW02283  
ID ADW02283 standard; protein; 189 AA.  
XX  
AC ADW02283;  
XX  
DT 07-APR-2005 (first entry)  
XX  
DE Human interferon alpha 17.  
XX  
KW Interferon alpha; interferon; IFN-alpha; neuroprotective;  
KW antiinflammatory; hepatotropic; virucide; cytostatic; gene therapy;  
KW multiple sclerosis; viral hepatitis; cancer.  
XX  
OS Homo sapiens.  
XX  
PN WO2005003157-A2.  
XX  
PD 13-JAN-2005.  
XX  
PF 30-MAR-2004; 2004WO-US009824.  
XX  
PR 10-JUN-2003; 2003US-0477246P.  
PR 24-JUN-2003; 2003US-0489725P.  
PR 30-SEP-2003; 2003US-00676705.  
PR 30-SEP-2003; 2003WO-US030802.  
XX  
PA (XENC-) XENCOR.  
XX  
PI Aguineldo AM, Beyna AJ, Cho HS, Desjarlais JR, Marshall SA;  
PI Muchhal U, Villegas MFA, Zhukovsky E, Quesenberry MS;  
XX  
DR WPI; 2005-091765/10.  
XX  
PT New variant type 1 Interferon (IFN)-beta, alpha or kappa proteins  
PT exhibiting modified immunogenicity, useful for treating IFN-responsive  
PT diseases such as multiple sclerosis, viral hepatitis or cancer.  
XX  
PS Disclosure; Fig 1; 112pp; English.  
XX  
CC This invention describes a novel variant type 1 interferon (IFN)-beta,  
CC alpha or kappa protein exhibiting modified immunogenicity as compared to  
CC a wild type protein. The variant type 1 IFN-beta exhibits modified  
CC immunogenicity if there is at least one modification at a position  
CC selected from 1, 2, 3, 4, 5, 6, 8, 9, 12, 15, 16, 22, 28, 30, 32, 36, 42,  
CC 43, 46, 47, 48, 49, 51, 92, 93, 96, 100, 101, 104, 111, 113, 116, 117,  
CC 120, 121, 124, 130, 149, and 155. The variant type 1 IFN-alpha protein  
CC comprises at least one modification at position 16, 27, 30, 89, 100, 110,  
CC 111, 117, 128 or 161. The variant type 1 IFN-kappa comprises at  
CC least one modification at position 1, 5, 8, 15, 18, 28, 30, 33, 37, 46,  
CC 48, 52, 65, 68, 76, 79, 89, 97, 112, 115, 120, 127, 133, 151, 161, 168 or  
CC 171. The variant proteins are used in a method for treating an interferon  
CC -responsive disorder and for methods of modulating immunogenicity of IFN.  
CC The variant protein demonstrates reduced binding to at least one human  
CC class II MHC allele. The products of the invention have neuroprotective,  
CC antiinflammatory, hepatotropic, virucide and cytostatic activity and can  
CC be used for gene therapy. The composition and methods are useful for  
CC treating interferon-responsive diseases such as multiple sclerosis, viral  
CC hepatitis or cancer. This sequence represents a human type I interferon  
CC alpha protein used in the method of the invention.  
XX  
SQ Sequence 189 AA;  
Query Match 100.0%; Score 961; DB 9; Length 189;

Best Local Similarity 100.0%; Pred. No. 9,3e-84;  
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MALSFSLIMAVLVSYSGSLGCDLPQTHSLGNRRALLILAQNGRISPSFCLKDRHDFG 60  
DB 1 MALSFSLIMAVLVSYSGSLGCDLPQTHSLGNRRALLILAQNGRISPSFCLKDRHDFG 60  
QY 61 LPOSEFGNOFOKTOAISVHEMIQOTFNFSTEDSSAAMBOSLLEKFTSTLYOQNNLE 120  
DB 61 LPOSEFGNOFOKTOAISVHEMIQOTFNFSTEDSSAAMBOSLLEKFTSTLYOQNNLE 120  
QY 121 ACVQEVGMERTPLMNEDSLIAVRKYFORITLVYTEKYSFPCAMEVVRAEIMRSLSFSTN 180  
DB 121 ACVQEVGMERTPLMNEDSLIAVRKYFORITLVYTEKYSFPCAMEVVRAEIMRSLSFSTN 180  
QY 181 LQKILRRKD 189  
DB 181 LQKILRRKD 189

RESULT 7  
AAE14832  
ID AAE14832 standard; protein, 189 AA.

AC AAE14832;  
DT 24-MAR-2003 (first entry)

DE Human interferon (IFN) alpha-17 precursor protein variant G45R.

KM Human; interferon alpha-17; IFNalpha-17; single nucleotide polymorphism;  
KM SNR; cancer; tumour; chronic myeloid leukaemia; infectious disease;  
KM viral infection; chronic hepatitis; acquired immune deficiency syndrome;  
KM AIDS; immune disorder; autoimmune disorder; allergy; obesity;  
KM rheumatoid arthritis; cardiovascular disease; metabolic disease;  
KM central nervous system disorder; CNS disorder; Alzheimer's disease;  
KM Parkinson's disease; chemotherapy treatment related disorder; wound;  
KM anemia; osteoporosis; mutant; mutein.

XX Homo sapiens.

XX Key Location/Qualifiers  
XX Peptide 1..23  
XX Protein /label= Signal\_peptide  
XX /label= Mature\_IFNalpha-17  
XX Misc-difference 45  
XX /note= "Wild-type Gly replaced by Arg"

XX WO200286156-A2.

XX 31-OCT-2002.

XX 23-APR-2002; 2002WO-EP005229.

XX 24-APR-2001; 2001FR-00005516.

XX (GENO-) GENODYSSEE.

XX Baccary J;

XX WPI; 2003-093152/08.

XX N-PSDB; AAD36842.

XX Novel isolated polynucleotide useful for identifying or amplifying  
XX polynucleotide, for analyzing biological characteristics of subject, and  
XX for preventing or treating cancer, metabolic and cardiovascular diseases.

XX Claim 14; Page; 64pp; English.

XX The invention relates to polynucleotide and polypeptide variance derived  
XX from human interferon (IFN) alpha-17 gene which comprises at least one  
XX single nucleotide polymorphism (SNP) selected from G771C and 809ins (A)

CC (insertion of base A at position 808). The IFNalpha-17 polynucleotide and  
CC polypeptide variants resulting due to SNP in the gene, or mimetic  
CC compounds having similar activity as the variants are used for preparing  
CC therapeutic agents for preventing or treating diseases such as cancers  
CC and tumours (e.g. chronic myeloid leukaemia, metastizing renal carcinoma),  
CC infectious diseases (e.g. viral infections including chronic hepatitis B  
CC and C, human immunodeficiency virus (HIV)/acquired immune deficiency  
CC syndrome (AIDS), infectious pneumonias, and venereal diseases such as  
CC genital warts), immunologically or autoimmunologically related diseases  
CC (e.g. rejection of tissue or organ grafts, allergies, asthma, psoriasis,  
CC rheumatoid arthritis, multiple sclerosis, Crohn's disease and ulcerative  
CC colitis), cardiovascular diseases, metabolic diseases (e.g. obesity),  
CC central nervous system (CNS) disorders (e.g. Alzheimer's disease,  
CC Parkinson's disease, schizophrenia, depression) and disorders connected  
CC with chemotherapy treatments. The therapeutic agents are also useful for  
CC preventing or treating wounds, anaemia in dialysed patient, and  
CC osteoporosis in an individual. Note: The present sequence is human interferon  
CC (IFN) alpha-17 protein variant. Note: The present sequence is not shown in  
CC the specification, but is derived from wild-type human IFNalpha-17  
CC protein (SEQ ID NO: 2) shown in Sequence Listing (AAE14830)

XX Sequence 189 AA;

XX Query Match 99.2%; Score 953; DB 6; Length 189;  
XX Best Local Similarity 99.5%; Pred. No. 5,4e-83;  
XX Matches 189; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MALSFSLIMAVLVSYSGSLGCDLPQTHSLGNRRALLILAQNGRISPSFCLKDRHDFG 60  
DB 1 MALSFSLIMAVLVSYSGSLGCDLPQTHSLGNRRALLILAQNGRISPSFCLKDRHDFG 60

QY 61 LPOSEFGNOFOKTOAISVHEMIQOTFNFSTEDSSAAMBOSLLEKFTSTLYOQNNLE 120  
DB 61 LPOSEFGNOFOKTOAISVHEMIQOTFNFSTEDSSAAMBOSLLEKFTSTLYOQNNLE 120  
QY 121 ACVQEVGMERTPLMNEDSLIAVRKYFORITLVYTEKYSFPCAMEVVRAEIMRSLSFSTN 180  
DB 121 ACVQEVGMERTPLMNEDSLIAVRKYFORITLVYTEKYSFPCAMEVVRAEIMRSLSFSTN 180

QY 181 LQKILRRKD 189  
DB 181 LQKILRRKD 189

RESULT 8

AAE20111  
ID AAE20111 standard; protein, 189 AA.

AC AAE20111;

DT 25-MAR-2003 (revised)  
DT 10-AUG-1992 (first entry)

DE Sequence encoded by leukocyte interferon leIF 1 cDNA.

XX Viral infection; therapy; malignancy.

XX Homo sapiens.

XX Key Location/Qualifiers  
XX Peptide 1..23  
XX /label= signal

XX GB2079291-A.

XX 20-JAN-1982.

XX 01-JUL-1981; 81GB-00020279.

XX 01-JUL-1980; 80US-00164986.

XX 08-SEP-1980; 80US-00184909.

XX 10-NOV-1980; 80US-00205578.

XX 21-APR-1981; 81US-00256204.

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XX (HOF ) HOFMANN-LA ROCHE AG.
PA (GETH ) GENENTECH INC.
PA (GETH ) GENENTECH INC.
XX Goedel DYN, Pestka S;
XX WPI: 1982-04460E/03.
DR N-PSDB; AAN20098.
XX Mature human leukocyte interferon polypeptide(s) - prep'd. from microbes
PT transformed with appropriate DNA sequences.
XX Disclosure; Fig 9; 20pp; English.
XX The inventors claim a polypeptide comprising the AA sequence of a mature
CC human leif and a DNA sequence encoding it. leif A-D, F, H-J and encoding
CC DNA are specifically claimed. They are natural allelic variations. leif
CC is isolated from the leukocytes of humans with chronic myelogenous
CC leukaemia, induced to produce interferon with Sendai or Newcastle disease
CC virus; esp. the cell line KG-1. (Updated on 25-MAR-2003 to correct PF
CC field.) (Updated on 25-MAR-2003 to correct PA field.)
XX SQ Sequence 189 AA;

Query Match          97.9%; Score 941; DB 1; Length 189;
Best Local Similarity 98.9%; Pred. No. 7.6e-82;
Matches 187; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

OY 1 MALSFSLMAVVLVLSYKSLGCDLPQTHSLGNRRALLILAQGRISPSFCLKDRHDFG 60
DB 1 MALSFSLMAVVLVLSYKSLGCDLPQTHSLGNRRALLILAQGRISPSFCLKDRHDFG 60
OY 61 LPOEFPDGNQFOKTOAIVLHEMIQOTFNLFTSDSSAAWQSLEKSTELVYQQLNMLE 120
DB 61 LPOEFPDGNQFOKTOAIVLHEMIQOTFNLFTSDSSAAWQSLEKSTELVYQQLNMLE 120
OY 121 ACVIOEVMGMEETPLMNDSSILAIVRKYPORITLVYTEKYSPCAWEVVAEIMRSLSFSTN 180
DB 121 ACVIOEVMGMEETPLMNDSSILAIVRKYPORITLVYTEKYSPCAWEVVAEIMRSLSFSTN 180
OY 181 LQKILRRKD 189
DB 181 LQKILRRKD 189

RESULT 9
ABG68061
ID ABG68061 standard; protein; 189 AA.
XX
XX ABG68061;
XX
XX 24-SEP-2002 (first entry)
XX
XX Human interferon alpha (IFN alpha) #3.
XX
XX Interferon; immune system-related disorder; viral infection; cancer;
XX parasitic infection; bacterial infection; autoimmune disease;
XX multiple sclerosis; lymphoma; allergy; hairy cell leukaemia; hepatitis C;
XX Kaposi's sarcoma; chronic myelogenous leukaemia; multiple myeloma;
XX basal cell carcinoma; malignant melanoma; ovarian cancer; hepatitis D;
XX cutaneous T cell lymphoma; anti-viral therapy; acquired immune disorder;
XX chronic hepatitis B; papilloma virus infection; vaccine adjuvants;
XX multidrug-resistant pulmonary tuberculosis; rabies; feline panleukopenia;
XX feline leukaemia virus infections; feline infectious peritonitis;
XX inflammatory airway disease; human.
XX
XX Homo sapiens.
XX
XX WO200236627-A2.
XX
XX 10-MAY-2002.
XX

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PF 05-NOV-2001; 2001WO-US047226.
XX
XX 03-NOV-2000; 2000US-0245754P.
PR 03-NOV-2000; 2000US-0246234P.
XX
XX (PBLB-) PBL BIOMEDICAL LAB.
XX
XX Pestka S;
XX
XX WPI: 2002-519235/55.
DR N-PSDB; ABK96741.
XX
XX Novel isolated interferon polypeptide and polynucleotides encoding the
PT polypeptide, useful for treating an immune system-related disorder e.g.
PT viral, parasitic or bacterial infections or allergy, in a non-human
PT animal.
XX
XX Claim 1; Page 75; 97pp; English.
XX
XX The invention describes an isolated interferon polypeptide (I). (I) is
CC useful for treating an immune system-related disorder, such as viral
CC infection, parasitic infection, bacterial infection, cancer, autoimmune
CC disease, multiple sclerosis, lymphoma, or allergy in a patient.
CC preferably a non-human animal, cancer, hairy cell leukaemia, Kaposi's
CC sarcoma, chronic myelogenous leukaemia, multiple myeloma, basal cell
CC carcinoma, malignant melanoma, ovarian cancer and cutaneous T cell
CC lymphoma. (I) can also be used for anti-viral therapy e.g. in the
CC treatment of acquired immune disorders, e.g. chronic hepatitis B,
CC hepatitis C, hepatitis D, papilloma virus infections, etc. (I) can be
CC used as part of an immunotherapy protocol, or as vaccine adjuvants. (I)
CC is also useful for treating bacterial infections e.g. multidrug-resistant
CC pulmonary tuberculosis. Most preferably (I) is useful for treating cats
CC as part of veterinary protocols, and thus are useful for treating viral
CC infections (e.g. feline leukaemia virus infections), feline
CC panleukopenia, feline infectious peritonitis, rabies, inflammatory airway
CC disease, in cats. (I) is also useful for treating dogs or other household
CC pets, and other farm animals. This is the amino acid sequence of a human
XX interferon-alpha described in the invention
XX
XX SQ Sequence 189 AA;

Query Match          96.7%; Score 929; DB 5; Length 189;
Best Local Similarity 96.3%; Pred. No. 1.1e-80;
Matches 182; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

OY 1 MALSFSLMAVVLVLSYKSLGCDLPQTHSLGNRRALLILAQGRISPSFCLKDRHDFG 60
DB 1 MALSFSLMAVVLVLSYKSLGCDLPQTHSLGNRRALLILAQGRISPSFCLKDRHDFG 60
OY 61 LPOEFPDGNQFOKTOAIVLHEMIQOTFNLFTSDSSAAWQSLEKSTELVYQQLNMLE 120
DB 61 LPOEFPDGNQFOKTOAIVLHEMIQOTFNLFTSDSSAAWQSLEKSTELVYQQLNMLE 120
OY 121 ACVIOEVMGMEETPLMNDSSILAIVRKYPORITLVYTEKYSPCAWEVVAEIMRSLSFSTN 180
DB 121 ACVIOEVMGMEETPLMNDSSILAIVRKYPORITLVYTEKYSPCAWEVVAEIMRSLSFSTN 180
OY 181 LQKILRRKD 189
DB 181 LQKILRRKD 189

RESULT 10
ADY67643
ID ADY67643 standard; protein; 189 AA.
XX
XX ADY67643;
XX
XX 02-JUN-2005 (first entry)
XX
XX Human interferon alpha SEQ ID NO 42.
XX
XX viral infection; interferon; virucide; vaccine; cytokine.
XX

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```
XX OS Homo sapiens.
XX XX WO2005023290-A2.
XX PD 17-MAR-2005.
XX XX 21-MAY-2004; 2004WO-US016201.
XX PE 23-MAY-2003; 2003US-0473134P.
XX PR
XX (PEST-) PESTYA BIOMEDICAL LAB INC.
XX PA
XX PI Peacka S, Lavoie TB, Clark WA;
XX XX WPI; 2005-223282/23.
XX DR N-PSDB; ADY67642.
XX PT Treating a virus-infected subject or reducing the subject's risk of viral
XX PT infection comprises administering to the subject an interferon
XX PT polypeptide.
XX PS Claim 1; SEQ ID NO 42; 185pp; English.
XX CC The invention relates to a method of treating a virus-infected subject or
XX CC reducing the subject's risk of viral infection comprising administering
XX CC to the subject an interferon polypeptide that is not a naturally
XX CC occurring interferon allele. The method is useful in treating a virus-
XX CC infected subject or reducing the subject's risk of viral infection. The
XX CC present sequence represents a human interferon alpha.
XX SQ Sequence 189 AA;
XX
XX Query Match 96.7%; Score 929; DB 9; Length 189;
XX Best Local Similarity 96.3%; Pred. No. 1.1e-80;
XX Matches 182; Conservative 2; Mismatches 5; Indels 0; Gaps 0;
XX
XX QY 1 MALSFSLIMAVLVSYKSIKSLGCDLPQTHSLGNRRALILIAQNGRISPSFCLKDRHDFG 60
XX DB 1 MALSFSLIMAVLVSYKSIKSLGCDLPQTHSLGNRRALILIAQNGRISPSFCLKDRHDFR 60
XX QY 61 LPQEFPGNQFOKQALSVLHEMIQOTFNLFTEDSSAAWQSILEKSTELYOQNLNLE 120
XX DB 61 IPOEFPGNQFOKQALSVLHEMIQOTFNLFTEDSSAAWQSILEKSTELYOQNLNLE 120
XX QY 121 ACVIOEVGMETPLMNEDSLIAVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSTN 180
XX DB 121 ACVIOEVGMETPLMNEDSLIAVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSTN 180
XX QY 181 LQKILRRKD 189
XX DB 181 LQKILRRKD 189
XX
XX RESULT 11
XX AAB12967
XX ID AAB12967 standard; protein; 189 AA.
XX AC AAB12967;
XX XX
XX DT 27-NOV-2000 (first entry)
XX XX Human interferon-alpha protein sequence SEQ ID #3.
XX DB Interferon alpha subtype; human; antiviral; cytosolic; neuroprotective;
XX XX cancer; Kaposi's sarcoma; non-Hodgkin's lymphoma; melanoma; leukaemia;
XX KW viral disease; hepatitis B; hepatitis C; herpes; cytomegalovirus; HIV;
XX KW HTLV-1; immune disorder; multiple sclerosis; SSPE; Shigren disease;
XX KW Padgett's disease.
XX XX Homo sapiens.
XX OS
XX XX WO2000042186-A1.
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XX PD 20-JUL-2000.
XX XX 05-JAN-2000; 2000WO-JP000015.
XX PE 12-JAN-1999; 99JP-00005138.
XX XX (SUMU) SUMITOMO PHARM CO LTD.
XX PA
XX PI Kojima S, Asakura A, Futatsuji T, Ota Y, Fukuda Y, Sagara S;
XX XX WPI; 2000-491057/43.
XX DR N-PSDB; AAA73601.
XX XX
XX PT Novel human interferon alpha subtype with high specific activity, for use
XX PT as an antiviral and anticancer agent.
XX PS Claim 1; Page 31-32; 40pp; Japanese.
XX CC This sequence represents human interferon alpha subtype protein. The
XX CC invention relates to the interferon alpha subtype nucleotide and protein
XX CC sequences, and includes vectors containing the DNA, host cells
XX CC transformed with the vectors, and methods for the production of the
XX CC recombinant interferon alpha using the transformants. The novel
XX CC interferon alpha exhibits antiviral, cytosolic, neuroprotective and
XX CC immunomodulatory activity. The recombinant protein encoded by the
XX CC interferon alpha subtype DNA can be used in the treatment and prevention
XX CC of cancer (e.g. renal cancer, breast cancer, pancreatic cancer, small
XX CC cell cancer, head and neck cancer, skin cancer, Kaposi's sarcoma, non-
XX CC Hodgkin's lymphoma, melanoma, T-cell leukaemia and hairy cell leukaemia),
XX CC viral diseases (e.g. hepatitis B and C, herpes, cytomegalovirus, HIV and
XX CC HTLV-1) and immune disorders (e.g. multiple sclerosis, SSPE, Shigren
XX CC disease and Padgett's disease).
XX SQ Sequence 189 AA;
XX
XX Query Match 95.8%; Score 921; DB 3; Length 189;
XX Best Local Similarity 95.8%; Pred. No. 6.3e-80;
XX Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;
XX
XX QY 1 MALSFSLIMAVLVSYKSIKSLGCDLPQTHSLGNRRALILIAQNGRISPSFCLKDRHDFG 60
XX DB 1 MALSFSLIMAVLVSYKSIKSLGCDLPQTHSLGNRRALILIAQNGRISPSFCLKDRHDFR 60
XX QY 61 LPQEFPGNQFOKQALSVLHEMIQOTFNLFTEDSSAAWQSILEKSTELYOQNLNLE 120
XX DB 61 IPOEFPGNQFOKQALSVLHEMIQOTFNLFTEDSSAAWQSILEKSTELYOQNLNLE 120
XX QY 121 ACVIOEVGMETPLMNEDSLIAVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSTN 180
XX DB 121 ACVIOEVGMETPLMNEDSLIAVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSTN 180
XX QY 181 LQKILRRKD 189
XX DB 181 LQKILRRKD 189
XX
XX RESULT 12
XX ABG68062
XX ID ABG68062 standard; protein; 189 AA.
XX AC ABG68062;
XX XX
XX DT 24-SEP-2002 (first entry)
XX XX Human interferon alpha (IFN alpha) #4.
XX DB Interferon; immune system-related disorder; viral infection; cancer;
XX XX parasitic infection; bacterial infection; autoimmune disease; hepatitis C;
XX KW multiple sclerosis; lymphoma; allergy; hairy cell leukaemia; hepatitis C;
XX KW Kaposi's sarcoma; chronic myelogenous leukaemia; multiple myeloma;
XX KW basal cell carcinoma; malignant melanoma; ovarian cancer; hepatitis D;
XX KW cutaneous T cell lymphoma; anti-viral therapy; acquired immune disorder;
```

KM chronic hepatitis B; papilloma virus infection; vaccine adjuvants;  
KM multidrug-resistant pulmonary tuberculosis; rabies; feline panleukopenia;  
KM feline leukaemia virus infections; feline infectious peritonitis;  
KM inflammatory airway disease; human.

OS Homo sapiens.

PN WO200236627-A2.

XX 10-MAY-2002.

PF 05-NOV-2001; 2001WO-US047226.

XX 03-NOV-2000; 2000US-0245754P.

PR 03-NOV-2000; 2000US-0246234P.

XX (PBLB-) PBL BIOMEDICAL LAB.

XX Pestka S;

XX MPI: 2002-519235/55.

DR N-PSDB; ABR67642.

PT Novel isolated interferon polypeptide and polynucleotides encoding the  
PT polypeptide, useful for treating an immune system-related disorder e.g.  
PT viral, parasitic or bacterial infections or allergy, in a non-human  
PT animal.

XX Claim 1; Page 77; 97pp; English.

PS The invention describes an isolated interferon polypeptide (I). (I) is  
XX useful for treating an immune system-related disorder, such as viral  
CC infection, parasitic infection, bacterial infection, cancer, autoimmune  
CC disease, multiple sclerosis, lymphoma, or allergy in a patient,  
CC preferably a non-human animal, cancer, hairy cell leukaemia, Kaposi's  
CC sarcoma, chronic myelogenous leukaemia, multiple myeloma, basal cell  
CC carcinoma, malignant melanoma, ovarian cancer and cutaneous T cell  
CC lymphoma. (I) can also be used for anti-viral therapy e.g. in the  
CC treatment of acquired immune disorders, e.g. chronic hepatitis B,  
CC hepatitis C, hepatitis D, papilloma virus infections, etc. (I) can be  
CC used as part of an immunotherapy protocol, or as vaccine adjuvants. (I)  
CC is also useful for treating bacterial infections e.g. multidrug-resistant  
CC pulmonary tuberculosis. Most preferably (I) is useful for treating cats  
CC as part of veterinarian protocols, and thus are useful for treating viral  
CC infections (e.g. feline leukaemia virus infections), feline  
CC panleukopenia, feline infectious peritonitis, rabies, inflammatory airway  
CC disease, in cats. (I) is also useful for treating dogs or other household  
CC pets, and other farm animals. This is the amino acid sequence of a human  
CC interferon-alpha described in the invention

XX Sequence 189 AA;

Query Match 95.8%; Score 921; DB 5; Length 189;

Best Local Similarity 95.8%; Pred. No. 6.3e-80;

Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 MALSFSLIMAVLVSYKSIICSLGCDLPQTHSLGNRRALILLAQWGRISPSFCLDRHDFG 60  
DB 1 MALSFSLIMAVLVSYKSIICSLGCDLPQTHSLGNRRALILLAQWGRISPSFCLDRHDFR 60  
QY 61 LPOEFPDGNQFOKQAIISVLHEMIQOTFNLFSTEDSSAAMBOSILKRFSTELYQOLNMLE 120  
DB 61 IPOEFPDGNQFOKQAIISVLHEMIQOTFNLFSTEDSSAAMBOSILKRFSTELYQOLNMLE 120  
QY 121 ACVIOEVMGMEETPLMNEDSLIAVRKYFORITLYLTEKKYSPCAWEVVAEIMRSISFSTN 180  
DB 121 ACVIOEVMGMEETPLMNEDSLIAVRKYFORITLYLTEKKYSPCAWEVVAEIMRSISFSTN 180  
QY 181 LQKILRRKD 189  
DB 181 LQKILRRKD 189

RESULT 13

ADY67645

ID ADY67645 standard; protein; 189 AA.

XX ADY67645;

DT 02-JUN-2005 (first entry)

XX Human interferon alpha SEQ ID NO 44.

KM viral infection; interferon; virucide; vaccine; cytokine.

XX Homo sapiens.

PN WO2005023290-A2.

XX 17-MAR-2005.

PF 21-MAY-2004; 2004WO-US016201.

XX 23-MAY-2003; 2003US-0473134P.

XX (PEST-) PESTRA BIOMEDICAL LAB INC.

PA Pestka S, Lavoie TB, Clark WA;

XX MPI: 2005-223282/23.

DR N-PSDB; ADY67644.

PT Treating a virus-infected subject or reducing the subject's risk of viral  
PT infection comprises administering to the subject an interferon  
PT polypeptide.

PS Claim 1; SEQ ID NO 44; 185pp; English.

XX The invention relates to a method of treating a virus-infected subject or  
CC reducing the subject's risk of viral infection comprising administering  
CC to the subject an interferon polypeptide that is not a naturally  
CC occurring interferon allele. The method is useful in treating a virus-  
CC infected subject or reducing the subject's risk of viral infection. The  
CC present sequence represents a human interferon alpha.

XX Sequence 189 AA;

Query Match 95.8%; Score 921; DB 9; Length 189;

Best Local Similarity 95.8%; Pred. No. 6.3e-80;

Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 MALSFSLIMAVLVSYKSIICSLGCDLPQTHSLGNRRALILLAQWGRISPSFCLDRHDFG 60  
DB 1 MALSFSLIMAVLVSYKSIICSLGCDLPQTHSLGNRRALILLAQWGRISPSFCLDRHDFR 60  
QY 61 LPOEFPDGNQFOKQAIISVLHEMIQOTFNLFSTEDSSAAMBOSILKRFSTELYQOLNMLE 120  
DB 61 IPOEFPDGNQFOKQAIISVLHEMIQOTFNLFSTEDSSAAMBOSILKRFSTELYQOLNMLE 120  
QY 121 ACVIOEVMGMEETPLMNEDSLIAVRKYFORITLYLTEKKYSPCAWEVVAEIMRSISFSTN 180  
DB 121 ACVIOEVMGMEETPLMNEDSLIAVRKYFORITLYLTEKKYSPCAWEVVAEIMRSISFSTN 180  
QY 181 LQKILRRKD 189  
DB 181 LQKILRRKD 189

RESULT 14

AAP30101

ID AAP30101 standard; protein; 189 AA.

XX AAP30101;

XX 25-MAR-2003 (revised)

DT 05-AUG-1992 (first entry)

```

XX DE Sequence encoding interferon IFN-alpha-76.
XX KW Antiviral; cell growth regulator; cancer; tumour; therapy.
XX OS Homo sapiens.
XX FT Key location/Qualifiers
FT Peptide 1..23
      /label= SIGNAL
XX MO802457-A.
XX PN 21-JUL-1983.
XX PD 15-JAN-1982; 82US-00339826.
XX PF 15-JAN-1982; 82US-00339826.
XX PR 15-JAN-1982; 82US-00339826.
XX PR 02-SEP-1982; 82US-00414053.
XX PA (CETU ) CETUS CORP.
XX PA (CETU ) CETUS CORP.
XX PI Innis MA;
XX PS WPI: 1983-723182/30.
XX DR N-PSDB; AAN30108.
XX PT Interferon-alpha 76 - useful as antiviral and cell growth regulatory
XX PT agent.
XX PS Disclosure; Fig 5; 28pp; English.
XX XX The inventors claim IFN-alpha-76 and DNA encoding it (see AAN30108,
XX CC AAP30101). IFN-alpha-76 is made by identifying and isolating the gene by
XX CC screening a library of human genomic DNA with an approp. IFN- alpha DNA
XX CC probe. It is useful as antiviral and cell growth regulatory agent. Dose
XX CC is 10(4)-10(7) i.u. The mature peptide (residues 24-189) is claimed
XX CC (Claim 1). (Updated on 25-MAR-2003 to correct PA field.) (Updated on 25-
XX CC MAR-2003 to correct DR field.)
XX SQ Sequence 189 AA;
XX
Query Match 95.6%; Score 919; DB 1; Length 189;
Best Local Similarity 95.8%; Pred. No. 9.7e-80;
Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;
QY 1 MALSFSLMAVILVLSYKISGLGCDLPQTHSLGNRRALILIAOMGRISPFSCDKDRHDFG 60
DB 1 MALSFSLMAVILVLSYKISGLGCDLPQTHSLGNRRALILIAOMGRISHFSCDKDRHDFG 60
QY 61 LPOEFPGNOFOKTOAISVLHEMIQQTFNLFSTEDSSAAWQSLEKSTELYYOQNLNLE 120
DB 61 PPEEFPGHQFOKAQAI SVLHEMIQQTFNLFSTEDSSAAWQSLEKSTELYYOQNLNLE 120
QY 121 ACVIOEVGMETPLMNEISILAVRKYFORITLYLTKKYSPCAWEVVAEIMRSLSFSTN 180
DB 121 ACVIOEVGMETPLMNEISILAVRKYFORITLYLTKKYSPCAWEVVAEIMRSLSFSTN 180
QY 181 LQKILRRKD 189
DB 181 LQKILRRKD 189
XX
RESULT 15
AAP50306
ID AAP50306 standard; protein; 189 AA.
XX
XX AAP50306;
XX
XX 25-MAR-2003 (revised)
DT 18-MAR-1992 (first entry)
XX

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DE Human interferon-alpha-M1 protein.
XX KW Interferon-alpha-M1; immunostimulant; virucide; antitumor; ss.
XX OS Homo sapiens.
XX MO802862-A.
XX PN 04-JUL-1985.
XX PD 20-DEC-1984; 84WO-AU000263.
XX PF 20-DEC-1984; 84WO-AU000263.
XX PR 23-DEC-1983; 83AU-00002982.
XX PR 20-DEC-1984; 84AU-00037009.
XX PA (MONTU ) UNIV MONASH.
XX PA (LINN/) LINNANE A W.
XX PA (COMW ) COMMONWEALTH SERUM LAB COMMISS.
XX DR WPI: 1985-171371/28.
XX DR N-PSDB; AAN50357.
XX XX New DNA coding for human alpha-interferon - is obtd. from human genome
XX PT library by using hybridisation probes.
XX PS Disclosure; Fig 2; 19pp; English.
XX CC This protein may be expressed in Escherichia coli using a vector phage
XX CC M13. The gene encoding it was isolated from the human genome using
XX CC hybridization probes. The human IFN-alpha-M1 has antiviral,
XX CC antiproliferative and immune response modulating activities. See also
XX CC AAN50358 and AAP50307. (Updated on 25-MAR-2003 to correct PR field.)
XX CC (Updated on 25-MAR-2003 to correct PA field.)
XX SQ Sequence 189 AA;
XX
Query Match 95.6%; Score 919; DB 1; Length 189;
Best Local Similarity 95.8%; Pred. No. 9.7e-80;
Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;
QY 1 MALSFSLMAVILVLSYKISGLGCDLPQTHSLGNRRALILIAOMGRISPFSCDKDRHDFG 60
DB 1 MALSFSLMAVILVLSYKISGLGCDLPQTHSLGNRRALILIAOMGRISHFSCDKDRHDFG 60
QY 61 LPOEFPGNOFOKTOAISVLHEMIQQTFNLFSTEDSSAAWQSLEKSTELYYOQNLNLE 120
DB 61 PPEEFPGHQFOKAQAI SVLHEMIQQTFNLFSTEDSSAAWQSLEKSTELYYOQNLNLE 120
QY 121 ACVIOEVGMETPLMNEISILAVRKYFORITLYLTKKYSPCAWEVVAEIMRSLSFSTN 180
DB 121 ACVIOEVGMETPLMNEISILAVRKYFORITLYLTKKYSPCAWEVVAEIMRSLSFSTN 180
QY 181 LQKILRRKD 189
DB 181 LQKILRRKD 189
XX
Search completed: December 15, 2005, 13:34:15
Job time : 192 secs

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GenCore version 5.1.6  
Copyright (c) 1993 - 2005 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: December 15, 2005, 13:25:38 ; Search time 229 Seconds  
(without alignments)  
582.292 Million cell updates/sec

Title: US-10-691-653-2

Sequence: 1 MALSFSLMANVLVLSKSLIC.....EIKRSLSFTNLQKILRRKD 189

Scoring table: BLOSUM62  
Gapop 10.0 , Gapept 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%

Listing first 45 summaries

Database : Uniprot\_05.80.\*  
1: uniprot\_sprot.\*  
2: uniprot\_trembl.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	961	100.0	189	1 IFN17_HUMAN	P01571 homo sapien
2	961	100.0	189	2 Q5VZ53_HUMAN	Q5VZ53 homo sapien
3	919	95.6	189	1 IFNA4_HUMAN	P05014 homo sapien
4	919	95.6	189	2 Q5VVL5_HUMAN	Q5VVL5 homo sapien
5	917	95.4	189	1 IFN10_HUMAN	P01566 homo sapien
6	917	95.4	189	2 Q5VVL3_HUMAN	Q5VVL3 homo sapien
7	882	91.8	189	1 IFNA7_HUMAN	P01567 homo sapien
8	882	91.8	189	2 Q5VVL4_HUMAN	Q5VVL4 homo sapien
9	872	90.7	189	1 IFN21_HUMAN	Q5VWD1 homo sapien
10	872	90.7	189	2 Q5VWD1_HUMAN	Q5VWD1 homo sapien
11	837	87.1	189	1 IFN16_HUMAN	P05015 homo sapien
12	837	87.1	189	2 Q5VVL2_HUMAN	Q5VVL2 homo sapien
13	837	87.1	189	2 Q5VVL2_HUMAN	Q5VVL2 homo sapien
14	826	86.0	189	2 IFNA6_HUMAN	Q14618 homo sapien
15	821	85.4	189	1 IFNA5_HUMAN	P01569 homo sapien
16	821	85.4	189	2 Q52LX3_HUMAN	Q52LX3 homo sapien
17	813	84.6	189	1 IFNA1_HUMAN	P01570 homo sapien
18	813	84.6	189	2 Q5VZ56_HUMAN	Q5VZ56 homo sapien
19	791	82.3	189	2 Q52J78_SAGOE	Q52J78 homo sapien
20	770.5	80.4	189	2 Q52LH8_HUMAN	Q52LH8 homo sapien
21	770.5	80.4	189	2 Q6DJX8_HUMAN	Q6DJX8 homo sapien
22	769	80.0	189	1 IFNA1_HUMAN	P01562 homo sapien
23	769	80.0	189	2 Q5VYQ2_HUMAN	Q5VYQ2 homo sapien
24	769	80.0	189	2 Q5VYQ2_HUMAN	Q5VYQ2 homo sapien
25	768	79.9	189	1 IFNA6_HUMAN	P05013 homo sapien
26	768	79.9	189	2 Q5VYQ1_HUMAN	Q5VYQ1 homo sapien
27	767.5	79.9	189	2 IFNA2_HUMAN	P01563 homo sapien
28	756	78.7	189	1 IFNA8_HUMAN	P12881 homo sapien
29	756	78.7	189	2 Q5VYQ3_HUMAN	Q5VYQ3 homo sapien
30	741	77.1	174	2 Q8MJI1_SALISC	Q8MJI1 salmisi sci
31	721	75.0	184	1 IFNA4_HORSE	P03006 equus cabal

32	717	74.6	184	1 IFNA2_HORSE	P05004 equus cabal
33	715	74.4	184	1 IFNA1_HORSE	P05003 equus cabal
34	709	73.8	184	1 IFNA3_HORSE	P05005 equus cabal
35	694.5	72.3	166	2 Q86UP4_HUMAN	Q86UP4 homo sapien
36	690	71.8	166	2 Q8WZ68_HUMAN	Q8WZ68 homo sapien
37	651	67.7	189	2 Q6VAB8_PIG	Q6VAB8 homo sapien
38	647.5	67.4	154	2 Q6ONB6_HUMAN	Q6ONB6 homo sapien
39	644	67.0	189	1 IFNA1_PIG	P49879 sus scrofa
40	626	65.1	189	2 Q68IQ5_PIG	Q68IQ5 sus scrofa
41	615	64.0	189	2 Q6QTF5_PIG	Q6QTF5 sus scrofa
42	612	63.7	189	1 IFNAH_BOVIN	P49878 bos taurus
43	610	63.5	166	2 Q5U8T2_PIG	Q5U8T2 sus scrofa
44	608	63.3	189	1 IFNA1_BOVIN	P07348 bos taurus
45	605	63.0	166	2 Q5U8T1_PIG	Q5U8T1 sus scrofa

## ALIGNMENTS

RESULT 1  
IFN17\_HUMAN STANDARD; PRT; 189 AA.  
ID IFN17\_HUMAN  
AC P01571; Q14639;  
DT 21-JUL-1986 (Rel. 01, Created)  
DT 01-OCT-1994 (Rel. 30, Last sequence update)  
DT 13-SEP-2005 (Rel. 48, Last annotation update)  
DE Interferon alpha-17 precursor (Interferon alpha-1') (Interferon alpha-T) (Interferon alpha-88).  
GN Name=IFNA17;  
OS Homo sapiens (Human).  
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;  
OC Homo.  
OX NCBI\_TaxID=9606;  
RN [1]  
RP NUCLEOTIDE SEQUENCE.  
RX MEDLINE=8522953; PubMed=3891272;  
RA Mizoguchi J., Pitsha P.M., Raj N.B.K.;  
RT "Efficient expression in Escherichia coli of two species of human  
interferon-alpha and their hybrid molecules.";  
RL DNA 4:221-232(1985).  
RN [3]  
RP NUCLEOTIDE SEQUENCE OF 14-189.  
RX MEDLINE=8523585; PubMed=4008999;  
RA Lund B., von Gabain A., Edlund T., Ny T., Lundgren E.;  
RT "Differential expression of interferon genes in a substrain of Namalwa  
cells.";  
RL J. Interferon Res. 5:229-238(1985).  
RN [4]  
RP NUCLEOTIDE SEQUENCE.  
RX MEDLINE=87024453; PubMed=3767336;  
RA Savelliev V.I., Zlochevsky M.L., Sorokin A.V., Naroditskaya V.A.,  
RA Bolotin A.P., Denysanova N.G., Kozlov Y.I., Neznanov N.S.;  
RA Gazaryan K.G., Monastyrskaya G.S., Sverdlov E.D.;  
RT "[Cloning and the determination of the nucleotide sequences in 2 genes  
of human leukocyte interferon].";  
RL Antibiot. Med. Biotechnol. 31:592-596(1986).  
RN [5]  
RP PROTEIN SEQUENCE OF 24-58.  
RX MEDLINE=98087498; PubMed=9425112;  
RA Nyman T.A., Toeloe H., Parkkinen J., Kalkkinen N.;  
RT "Identification of nine interferon-alpha subtypes produced by Sendai  
virus-induced human peripheral blood leucocytes.";  
RL Biochem. J. 329:295-302(1998).  
RN [6]  
RP NUCLEOTIDE SEQUENCE OF 24-56.

RX	MEDLINE=92340576; PubMed=1634550;
RA	Zoon K.C., Miller D., Bekisz J., zur Nedden D., Enterline J.C.,
RA	Nguyen N.Y., Hu R.O.;
RT	"Purification and characterization of multiple components of human
RT	lymphoblastoid interferon-alpha.";
RL	J Biol. Chem. 267:15210-15216(1992).
RP	[7]
RR	VARIANT ARG-184.
RX	MEDLINE=98376207; PubMed=9712362;
RA	Hussain M., Tan T., Ni D., Gill D.S., Liao M.-D.;
RT	"A new allele of interferon-alpha17 gene encoding IFN-alpha17b is the
RT	major variant in human population.";
RL	J. Interferon Cytokine Res. 18:465-477(1998).
CC	-I- FUNCTION: Produced by macrophages, IFN-alpha have antiviral
CC	activities. Interferon stimulates the production of two enzymes: a
CC	protein kinase and an oligoadenylate synthetase.
CC	-I- SUBCELLULAR LOCATION: Secreted.
CC	-I- SIMILARITY: Belongs to the alpha/beta interferon family.
CC	
CC	This Swiss-Prot entry is copyright. It is produced through a collaboration
CC	between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC	the European Bioinformatics Institute. There are no restrictions on its
CC	use as long as its content is in no way modified and this statement is not
CC	removed.
CC	-----
DR	EMBL; M1026; AAA52725.1; -; mRNA.
DR	EMBL; V00532; CAA23793.1; -; Genomic_DNA.
DR	EMBL; M38289; AAA59165.1; -; mRNA.
DR	EMBL; M71246; AAA52713.1; -; mRNA.
DR	PIR; A01835; IYHU9.
DR	PIR; I56314; I56314.
DR	HSSP; P01563; ITTF.
DR	SMR; P01571; 24-189.
DR	Ensembl; ENSG00000186809; Homo sapiens.
DR	HGNc; HGNC:5422; IFNA17.
DR	MM, 147583; -
DR	GO; GO:0005132; F:interferon-alpha/beta receptor binding; TAS.
DR	GO; GO:0009615; P:response to virus; TAS.
DR	InterPro; IPRO00471; Interferon abd.
DR	PANTHER; PTHR11691; Interferon_abd; 1.
DR	Pfam; PF00143; Interferon; 1.
DR	PRINTS; PR00266; INTERFERONAB.
DR	ProDom; PD000550; Interferon_abd; 1.
DR	PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW	Antiviral defense; Cytokine; Direct protein sequencing;
KW	Multigene family; Polymorphism; Signal.
FT	SIGNAL
FT	CHAIN
FT	DISULFID
FT	DISULFID
FT	VARIANT
FT	CONFLICT
FT	CONFLICT
SO	SEQUENCE
Query Match	189 AA; 21728 MW; 0448EAEAB9DFC32 CRC64;
Best Local Similarity	100.0%; Score 961; DB 1; Length 189;
Matches	189; Conservative 100.0%; Pred. No. 4,4e-75; Indels 0; Gaps 0;
OY	1 MALSFSLMAVIVLSYKISCSIGCDLPHTSHIGNRRALITLAQWRISPSPCLKRHDHG 60
Dy	1 MALSFSLMAVIVLSYKISCSIGCDLPHTSHIGNRRALITLAQWRISPSPCLKRHDHG 60
OY	61 LPQEFDDNOCKQAIVLHEMTIOOTNNLPSTENSSAAWBSLLKSTELYOOLNLE 120
Dy	61 LPQEFDDNOCKQAIVLHEMTIOOTNNLPSTENSSAAWBSLLKSTELYOOLNLE 120
OY	121 ACVIOEVGMEEPTPLANNEDSIILAVKYCFORITLYTEKKYSPPCAWEVRVAETIRSLSPSTN 180
Dy	121 ACVIOEVGMEEPTPLANNEDSIILAVKYCFORITLYTEKKYSPPCAWEVRVAETIRSLSPSTN 180
OY	181 LQKILRRKD 189

D6			
	181	LQTKRRKD	189
RESULT 2			
ID	Q5VZ53_HUMAN	PRT;	189 AA.
AC	Q5VZ53;		
DT	01-FEB-2005 (TrEMBLrel. 29, Created)		
DT	01-FEB-2005 (TrEMBLrel. 29, Last sequence update)		
DT	13-SEP-2005 (TrEMBLrel. 31, Last annotation update)		
DE	Interferon, alpha 17.		
CN	Name=IFNA17; ORNames=RPI1-380P16.10-001;		
OS	Homo sapiens (Human).		
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;		
OC	Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;		
CC	Homio.		
OX	NCBI_TaxID=9606;		
RN	[1]		
RP	NUCLEOTIDE SEQUENCE.		
RA	Beasley R.;		
RL	Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases.		
RN	[2]		
RP	NUCLEOTIDE SEQUENCE.		
RC	TISSUE=PCR rescued clones;		
RX	MEBLIN=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;		
RA	Strauberg R.L., Fengold E.A., Grouse L.H., Derge J.G.,		
RA	Klausner R.D., Collins F.S., Wagner L., Shennan C.M., Schuler G.D.,		
RA	Alschul S.F., Zeeberg B., Bueltow K.H., Schaeffer C.F., Bhat N.K.,		
RA	Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heile F.,		
RA	Ditchenko L., Marsina K., Farmer A.A., Rubin G.W., Hong L.,		
RA	Stepleson M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,		
RA	Brownstein W.J., Ustin T.B., Tosinyluki S., Carninci P., Prange C.,		
RA	Rana S.S., Logueliano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,		
RA	Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,		
RA	Richards S., Wooley K.C., Hale S., Garcia A.M., Gay L.J., Hulik S.W.,		
RA	Vallalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,		
RA	Faney J., Helton E., Kettelman M., Madan A., Rodriguez S., Sanchez A.,		
RA	Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,		
RA	Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,		
RA	Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,		
RA	Butterfield J.S.N., Krzywinski M.I., Skalak U., Smalits D.E.,		
RA	Scherer A., Schein J.E., Jones S.J.M., Marra M.A.;		
RT	"Generation and initial analysis of more than 15,000 full-length human		
RI	and mouse cDNA sequences.";		
RI	Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).		
RN	[3]		
RP	NUCLEOTIDE SEQUENCE.		
RC	TISSUE=PCR rescued clones;		
RG	NIH MGC Project;		
RL	Submitted (JUN-2005) to the EMBL/GenBank/DDBJ databases.		
RN	[4]		
RP	NUCLEOTIDE SEQUENCE.		
RC	TISSUE=PCR rescued clones;		
RG	NIH MGC Project;		
RL	Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases.		
CC	-I- SUBCELLULAR LOCATION: Secreted (By similarity).		
DR	EMBL; AL162420; CAH73185.1; -; Genomic_DNA.		
DR	EMBL; BC098355; AAH98355.1; -; mRNA.		
DR	EMBL; BC096732; AAH96732.1; -; mRNA.		
DR	SMR; Q5VZ53; 24-189.		
DR	ENSEMBL; ENSG00000186809; Homo sapLens.		
DR	GO; GO:0005576; C:extracellular region; IEA.		
DR	GO; GO:0005126; F:hematopoietic/inferferon-class (D200-domain. . .; IEA		
DR	GO; GO:0006952; P:defense response; IEA.		
DR	InterPro; IPR000471; Interferon_abd.		
DR	Pfam; PF00143; Interferon_1.		
DR	PRINTS; PR00266; INTERFERONAB.		
DR	SMART; SMO0076; Ifabd_1.		
DR	PROSITE; PS00252; INTERFERON_A_B_D; 1.		
DR	Antiviral defense; CytoKine.		
SW	SEQUENCE 189 AA; 21728 MW; 0448BAEAB9DFC32 CRC64;		

Query Match 100.0%; Score 961; DB 2; Length 189;  
 Best Local Similarity 100.0%; Pred. No. 4-4e-75;  
 Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MALSFSLMAVLYVSYKISICSLGCDLPQTHSLGNRRALLILAQMGRISSPSCIKDRHDFG 60  
 DB 1 MALSFSLMAVLYVSYKISICSLGCDLPQTHSLGNRRALLILAQMGRISSPSCIKDRHDFG 60  
 QY 61 LPOEEDGNQFOKTOAISVLHEMIQOTFNLFTEDSSAAMEOSILKEFSTELYQOLNNLE 120  
 DB 61 LPOEEDGNQFOKTOAISVLHEMIQOTFNLFTEDSSAAMEOSILKEFSTELYQOLNNLE 120  
 QY 121 ACYIOEGMEETPLNMEDSLIAVRKYFORITLVLTEKKYSPCAMEVYRAIMRSLSFSTN 180  
 DB 121 ACYIOEGMEETPLNMEDSLIAVRKYFORITLVLTEKKYSPCAMEVYRAIMRSLSFSTN 180  
 QY 181 LOKILRRKD 189  
 DB 181 LOKILRRKD 189

RESULT 3  
 IFNA4 HUMAN  
 ID IFNA4 HUMAN STANDARD; PRT; 189 AA.  
 AC P05014; P13358;  
 DT 13-AUG-1987 (Rel. 05, Created)  
 DT 10-MAY-2005 (Rel. 47, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Interferon alpha-4 precursor (Interferon alpha-4B) (Interferon alpha-4M1) (Interferon alpha-76).  
 GN Name=IFNA4;  
 OS Homo sapiens (human).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; Homo.  
 OC NCBI\_TaxID=9606;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE, AND VARIANTS ALPHA-4B THR-74 AND VAL-137.  
 RX MEDLINE=6037205; PubMed=4057246; Fujisawa J.-I., Haynes J.R., Henko K., Brosius J., Fujisawa A.,  
 RA Hochstadt J., Kovacic T., Pasek M., Schambeck A., Schmidt J., Todokoro K., Maelchli M., Nagata S., Weissmann C.;  
 RT "Structural relationship of human interferon alpha genes and pseudogenes.";  
 RL J. Mol. Biol. 185:227-260(1985).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=84307815; PubMed=6089830; Minamide A.W., Belharz M.W., McMullen G.L., Macreadie I.G., Murphy M., Nisbet I.T., Novitski C.E., Woodrow G.C.;  
 RA "Nucleotide sequence and expression in E. coli of a human interferon-alpha gene selected from a genomic library using synthetic oligonucleotides.";  
 RT Biochem. Int. 8:725-732(1984).  
 RN [3]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA], AND VARIANT THR-74.  
 RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899; Straussberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Krausner R.D., Collins F.S., Wagner L., Shenman C.M., Schuler G.D., Altschul S.F., Zeeberg B., Bueltow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.W., Hong L., Scapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., Brownstein M.J., Udell T.B., Toshiyuki S., Cantinot P., Prange C., Raha S.S., Loguailano N.A., Peters G.J., Abrahams R.D., Mullaly S.J., Bosak S.A., McGowan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Huliy S.W., Villalón D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., Fahy J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smallos D.E.,

RA Scherch A., Schein J.E., Jones S.J.M., Maria M.A.;  
 RT "Generation and initial analysis of more than 15,000 full-length human RT and mouse cDNA sequences.";  
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).  
 RN [4]  
 RP PROTEIN SEQUENCE OF 24-56.  
 RX MEDLINE=98087498; PubMed=9425112; Nyman T.A., Toeloe H., Parkkinen J., Kalkkinen N.;  
 RA "Identification of nine interferon-alpha subtypes produced by Sendai virus-induced human peripheral blood leucocytes.";  
 RL Biochem. J. 329:295-302(1998).  
 RN [5]  
 RP POLYMORPHISM.  
 RX MEDLINE=97474410; PubMed=9335434; Hussain M., Gill D.S., Liao M.-J.;  
 RT "Both variant forms of interferon-alpha4 gene (IFNA4 and IFNA4b) are present in the human population.";  
 RL J. Interferon Cytokine Res. 17:559-566(1997).  
 CC -1- FUNCTION: Produced by macrophages, IFN-alpha have antiviral activities. Interferon stimulates the production of two enzymes: a protein kinase and an oligoadenylate synthetase.  
 CC -1- SUBCELLULAR LOCATION: Secreted.  
 CC -1- POLYMORPHISM: Two forms exist, alpha-4a (shown here) and alpha-4b. They seem to be equally abundant.  
 CC -1- SIMILARITY: Belongs to the alpha/beta interferon family.  
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 CC EMBL: X02955; CA26701.1; -; Genomic\_DNA.  
 CC EMBL: M27318; AA52726.1; -; mRNA.  
 CC EMBL: BC074965; AA74965.1; -; mRNA.  
 CC EMBL: BC074966; AA74966.1; -; mRNA.  
 CC PIR: E23753; IYU4B.  
 CC PIR: I52347; I52347.  
 CC HSSP: P01563; IITP.  
 CC SMK: P05014; 24-189.  
 CC ENSEMBL: ENSG00000147877; Homo sapiens.  
 CC HGENC: HGNC:5425; IFNA4.  
 CC MIM: 147564; -.  
 CC GO: GO:0005132; F:interferon-alpha/beta receptor binding; TAS.  
 CC GO: GO:0009615; P:response to virus; TAS.  
 CC Interferon: IFR000471; Interferon\_abd. 1.  
 CC PANTHER: PTHR11691; Interferon\_abd. 1.  
 CC Pfam: PF00143; Interferon. 1.  
 CC PRINTS: PR00266; INTERFERONAB.  
 CC SMART: SM00076; IFab1.  
 CC PROSITE: PS00252; INTERFERON\_A\_B\_D. 1.  
 CC Antiviral defense, Cytokine, Direct protein sequencing;  
 CC Multigene family; Polymorphism; Signal.  
 CC SIGNAL 1 23  
 CC CHAIN 24 189  
 CC DISULFID 24 122  
 CC DISULFID 52 162  
 CC VARIANT 74 74  
 CC VARIANT 137 137  
 CC SEQUENCE 189 AA; 21808 MW; 828DF9C3AB337F CRC64;  
 Query Match 95.6%; Score 919; DB 1; Length 189;  
 Best Local Similarity 95.8%; Pred. No. 1.3e-71;  
 Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 MALSFSLMAVLYVSYKISICSLGCDLPQTHSLGNRRALLILAQMGRISSPSCIKDRHDFG 60  
 DB 1 MALSFSLMAVLYVSYKISICSLGCDLPQTHSLGNRRALLILAQMGRISSPSCIKDRHDFG 60  
 QY 61 LPOEEDGNQFOKTOAISVLHEMIQOTFNLFTEDSSAAMEOSILKEFSTELYQOLNNLE 120  
 DB 61 LPOEEDGNQFOKTOAISVLHEMIQOTFNLFTEDSSAAMEOSILKEFSTELYQOLNNLE 120

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Db      61 PFEEDFHQFOKAQAIIVLHEMIQOTFNLFTEDSSAAMEQSLLKEFSTELLYOQNLNLE 120
Qy      121 ACVIOEVGMERTPLMNEDESIILAVKCYFORITLYLEKTKYSPAMVVAEIMRSISFSTN 180
Db      121 ACVIOEVGMERTPLMNEDESIILAVKCYFORITLYLEKTKYSPAMVVAEIMRSISFSTN 180
Qy      181 LOKILRRKD 189
Db      181 LOKILRRKD 189

RESULT 4
OSV15_5_HUMAN PRELIMINARY; PRT; 189 AA.
ID OSV15_5_HUMAN
AC OSV15_5
DT 01-FEB-2005 (TRENBLREL. 29, Created)
DT 01-FEB-2005 (TRENBLREL. 29, Last sequence update)
DE Interferon, alpha 4.
GN Name=IFNA4; ORFNames=RP11-1P8.4-001;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Pelan S.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
CC -1- SUBCELLULAR LOCATION: Secreted (by similarity).
DR EMBL; AL512606; CAH71188.1; -; Genomic_DNA.
DR SMR; OSV15_5: 24-189.
DR Ensembl; ENSG00000147877; Homo sapiens.
DR GO; GO:0005615; C:extracellular space; IEA.
DR GO; GO:0005126; F:hematopoietin/interferon-claas (D200-domain. . .; IEA.
DR GO; GO:0006952; P:defence response; IEA.
DR GO; GO:0009615; P:response to virus; IEA.
DR InterPro; IPR000471; Interferon_abd.
DR Pfam; PF00143; Interferon_1.
DR PRINTS; PR00266; INTERFERONAB.
DR PRODOM; PD000550; Interferon_abd; 1.
DR SMART; SM00076; IFabd; 1.
DR PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW Antiviral defense; Cytokine.
SQ SEQUENCE 189 AA; 21808 MW; 828DF9C3AABC37F CRC64;

Query Match 95.6%; Score 919; DB 2; Length 189;
Best Local Similarity 95.8%; Pred. No. 1.9e-71;
Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

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DT      13-SEP-2005 (Rel. 48, Last annotation update)
DE      Interferon alpha-10 precursor (Interferon alpha-C) (Ielf C)
GN      (Interferon alpha-6L).
GN      Name=IFNA10;
OS      Homo sapiens (Human).
OC      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC      Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;
OC      Homo.
OX      NCBI_TaxID=9606;
RN      [1]
RP      NUCLEOTIDE SEQUENCE.
RX      MEDLINE=81148795; PubMed=6163083;
RA      Goeddel D.V., Leung D.W., Dull T.J., Gross M., Lawn R.M.,
RA      McCandlish R., Seeburg P.H., Ullrich A., Vetterton E., Gray P.W.;
RT      "The structure of eight distinct cloned human leukocyte interferon
RT      cDNAs.";
RL      Nature 290:20-26(1991).
RN      [2]
RP      NUCLEOTIDE SEQUENCE.
RX      MEDLINE=89328015; PubMed=2526839;
RA      Bartholomew C., Windass J.D.;
RT      "Identification of a functional allele of a human interferon-alpha
RT      gene previously characterized as a pseudogene.";
RL      J. Interferon Res. 9:407-417(1989).
RN      [3]
RP      NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RX      MEDLINE=22386257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA      Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA      Klausner R.D., Collins F.S., Wagner K.H., Shenmen C.M., Schuler G.D.,
RA      Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA      Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA      Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA      Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA      Brownstein M.J., Uscin T.B., Toshtycki S., Carrincci P., Prange C.,
RA      Rana S.S., Loguettano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA      Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA      Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulik S.W.,
RA      Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA      Fahey J., Helton E., Kettelman W., Madan A., Rodriguez S., Sanchez A.,
RA      Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA      Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA      Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA      Butlerfield Y.S.N., Krzywinski M.I., Skalska T., Smalins D.E.,
RA      Schnerch A., Schein J.E., Jones S.J.M., Maira M.A.,
RT      "Generation and initial analysis of more than 15,000 full-length human
RT      and mouse cDNA sequences.";
RL      Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN      [4]
RP      PROTEIN SEQUENCE OF 24-53.
RX      MEDLINE=98087498; PubMed=9425112;
RA      Nyman T.A., Toeloe H., Parkkinen J., Kalkkinen N.;
RT      "Identification of nine interferon-alpha subtypes produced by Sendai
RT      virus-induced human peripheral blood leucocytes.";
RL      Biochem. J. 329:295-302(1998).
CC      -1- FUNCTION: Produced by macrophages, IFN-alpha have antiviral
CC      activities. Interferon stimulates the production of two enzymes: a
CC      protein kinase and an oligoadenylate synthetase.
CC      -1- SUBCELLULAR LOCATION: Secreted.
CC      -1- SIMILARITY: Belongs to the alpha/beta interferon family.
CC      This Swiss-Prot entry is copyright. It is produced through a collaboration
CC      between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC      the European Bioinformatics Institute. There are no restrictions on its
CC      use as long as its content is in no way modified and this statement is not
CC      removed.
CC      -----
DR      EMBL; V00551; CAA23812.1; -; mRNA.
DR      EMBL; BC069409; AAH69409.1; -; mRNA.
DR      PIR; A60937; IVH0A5.
DR      HSSP; P01563; 1ITF.
DR      SMR; P01566; 24-189.
DR      Ensembl; ENSG00000186803; Homo sapiens.
DR      HGNC; HGNC:5418; IFNA10.

```



DR MIM; 147577; -  
 DR GO; GO:0005576; C:extracellular region; NAS.  
 DR GO; GO:0005112; F:interferon-alpha/beta receptor binding; ISS.  
 DR GO; GO:0009615; P:response to virus; ISS.  
 DR InterPro; IPR000471; Interferon abd.  
 DR PANTHER; PTHR11691; Interferon abd; 1.  
 DR Pfam; PF00143; Interferon; 1.  
 DR PRINTS; PR00266; INTERFERONAB.  
 DR PRODOM; PD000550; Interferon\_abd; 1.  
 DR PROSITE; PS00252; INTERFERON\_A\_B\_D; 1.  
 KM Antiviral defense; Cytochrome; Direct protein sequencing;  
 KM Multigene family; Signal.  
 FT SIGNAL 1 23  
 FT CHAIN 24 189 Interferon alpha-10.  
 FT DISULFID 24 122 By similarity.  
 FT DISULFID 52 162 By similarity.  
 SQ SEQUENCE 189 AA; 21835 MW; CEC680996FDA706B CRC64;

Query Match 95.4%; Score 917; DB 1; Length 189;  
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 Matches 180; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 MALSFSLMAVLVSYKSGCDLPQTHSLGNRRALITLLAOMGRISPFSCLDNRHDFG 60  
 DB 1 MALSFSLMAVLVSYKSGCDLPQTHSLGNRRALITLLAOMGRISPFSCLDNRHDFR 60  
 QY 61 LPQEPDGNQFOKQAISVLHEMIQOTFNLFTSTEDSSAAEQSLIEKFSTELYOQNLNLE 120  
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 QY 121 ACVIOEVMETPLMNDSTILAVRKYFORITLYLTKKYSPCAEVVRATIMRSLSFSTN 180  
 DB 121 ACVIOEVMETPLMNDSTILAVRKYFORITLYLTKKYSPCAEVVRATIMRSLSFSTN 180  
 QY 181 LQKLRKRD 189  
 DB 181 LQKLRKRD 189  
 RESULT 6  
 ID OSV13\_HUMAN PRELIMINARY; PRT; 189 AA.  
 AC OSV13\_HUMAN  
 DT 01-FEB-2005 (TrEMBLrel. 29, Created)  
 DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)  
 DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)  
 DE Interferon, alpha 10.  
 GN Name=IFNA10; ORFNames=RP11-1P8.9-001;  
 OS Homo sapiens (Human).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;  
 OC Homo.  
 NCBI\_TaxID=9606;  
 RN NUCLEOTIDE SEQUENCE.  
 RP Pelan S.;  
 RA Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.  
 CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).  
 DR EMBL; AL512606; CAH71191.1; -; Genomic\_DNA.  
 DR SMR; OSV13; 24-189.  
 DR GO; GO:0005576; C:extracellular region; IEA.  
 DR GO; GO:0005126; F:Hematopoietin/interferon-c1aas (D200-domain. . .; IEA.  
 DR GO; GO:0009615; P:defense response; IEA.  
 DR InterPro; IPR000471; Interferon\_abd.  
 DR Pfam; PF00143; Interferon; 1.  
 DR PRINTS; PR00266; INTERFERONAB.  
 DR SMART; SM00076; IFABD; 1.  
 DR PROSITE; PS00252; INTERFERON\_A\_B\_D; 1.  
 KM Antiviral defense; Cytochrome.  
 SQ SEQUENCE 189 AA; 21835 MW; CEC680996FDA706B CRC64;

Query Match 95.4%; Score 917; DB 2; Length 189;  
 Best Local Similarity 95.2%; Pred. No. 2.8e-71;

Matches 180; Conservative 4; Mismatches 5; Indels 0; Gaps 0;  
 QY 1 MALSFSLMAVLVSYKSGCDLPQTHSLGNRRALITLLAOMGRISPFSCLDNRHDFG 60  
 DB 1 MALSFSLMAVLVSYKSGCDLPQTHSLGNRRALITLLAOMGRISPFSCLDNRHDFR 60  
 QY 61 LPQEPDGNQFOKQAISVLHEMIQOTFNLFTSTEDSSAAEQSLIEKFSTELYOQNLNLE 120  
 DB 61 LPQEPDGNQFOKQAISVLHEMIQOTFNLFTSTEDSSAAEQSLIEKFSTELYOQNLNLE 120  
 QY 121 ACVIOEVMETPLMNDSTILAVRKYFORITLYLTKKYSPCAEVVRATIMRSLSFSTN 180  
 DB 121 ACVIOEVMETPLMNDSTILAVRKYFORITLYLTKKYSPCAEVVRATIMRSLSFSTN 180  
 QY 181 LQKLRKRD 189  
 DB 181 LQKLRKRD 189

RESULT 7  
 ID IFNA7\_HUMAN STANDARD; PRT; 189 AA.  
 AC P01567; Q14607;  
 DT 21-JUN-1986 (Rel. 01, Created)  
 DT 21-JUN-1986 (Rel. 01, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Interferon alpha-7 precursor (Interferon alpha-J1) (IFN-alpha-J1)  
 DE (Interferon alpha-J) (leif J).  
 GN Name=IFNA7;  
 OS Homo sapiens (Human).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;  
 OC Homo.  
 NCBI\_TaxID=9606;  
 RN NUCLEOTIDE SEQUENCE.  
 RP MEDLINE=86037205; PubMed=4057246;  
 RA Henco K., Brosius J., Fujisawa A., Fujisawa J.-I., Haynes J.R.,  
 RA Hochstadt J., Kovacic T., Paek M., Schamboeck A., Schmid J.,  
 RA Todokoro K., Waelchli M., Nagata S., Weissmann C.;  
 RT "Structural relationship of human interferon alpha genes and  
 RT pseudogenes.";  
 RL J. Mol. Biol. 185:227-260(1985).  
 RN NUCLEOTIDE SEQUENCE.  
 RP MEDLINE=83010248; PubMed=6181262;  
 RA Ullrich A., Gray A., Goeddel D.V., Dull T.J.;  
 RT "Nucleotide sequence of a portion of human chromosome 9 containing a  
 RT leukocyte interferon gene cluster.";  
 RL J. Mol. Biol. 156:467-486(1982).  
 RN NUCLEOTIDE SEQUENCE.  
 RP MEDLINE=86005847; PubMed=2995168;  
 RA Cohen S., Velan B., Grosfeld H., Shalita Z., Leitner M.,  
 RA Shafferman A.;  
 RT "Cloning, expression and biological activity of a new variant of human  
 RT interferon alpha identified in virus induced lymphoblastoid cells.";  
 RL Dev. Biol. Stand. 60:111-122(1985).  
 RN NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].  
 RP TISSUE=Brain;  
 RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;  
 RA Klausner R.L., Reinhold E.A., Grouse L.H., Borge J.G.,  
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,  
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bat N.K.,  
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
 RA Stjepanec M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.B.,  
 RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,  
 RA Rana S.S., Loggellano N.A., Peters G.J., Adamson R.D., Mullany S.J.,  
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Huliyk S.W.,  
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,



DT 10-MAY-2005 (Ref. 47, last annotation update)  
 DE Interferon alpha-21 precursor (Interferon alpha-F) (leif F).  
 GN Name=IFNA21;  
 OS Homo sapiens (human).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 CC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homiidae;  
 CC Homo.  
 NCBI\_TaxID=9606;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=8148795; PubMed=6163083;  
 RA Goeddel D.V., Leung D.W., Dull T.J., Gross M., Lawn R.M.,  
 RT McCandless R., Seeburg P.H., Ullrich A., Yelverton E., Gray P.W.;  
 "The structure of eight distinct cloned human leukocyte interferon  
 cDNAs.";  
 RL Nature 290:20-26 (1981).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE.  
 RA Gren E.Y., Berzin V.M., Teismanis A.Y., Apalson U.R., Vishnevskii Y.I.,  
 RT Vansore I.V., Dishler A.V., Pudova N.V., Smorodintsev A.A.,  
 RA Iovlev V.I., Stepanov A.N., Feldman G.Y., Meldeiras Y.A., Loza V.P.,  
 RA Kavan V.M., Elimov V.A., Sverdlov E.D.;  
 "A new type of leukocytic interferon.";  
 RL Dokl. Biochem. 269:91-95 (1983).  
 RN [3]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].  
 RX MEDLINE=2238625; PubMed=12477932; DOI=10.1073/pnas.242603899;  
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,  
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,  
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,  
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
 RA Stapleton M., Soares W.B., Bonaldo M.F., Casavant T.L., Scheetz T.B.,  
 RA Brownstein M.J., Uscdin T.B., Toshiyuki S., Carninci P., Prange C.,  
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 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Holys S.W.,  
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
 RA Fahey J., Helton E., Kettelman M., Madan A., Rodriguez S., Sanchez A.,  
 RA Whitting R.W., Touchman J.W., Green E.D., Dickinson M.C.,  
 RA Blakeley R.C., Grimwood J., Schmutz J., Myers R.M.,  
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,  
 RA Butterfield Y.S.N., Krzywinski M.I., Skalska M., Smalls D.E.,  
 RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;  
 "Generation and initial analysis of more than 15,000 full-length human  
 and mouse cDNA sequences.";  
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).  
 RN [4]  
 RP PROTEIN SEQUENCE OF 24-58.  
 RX MEDLINE=98087498; PubMed=9425112;  
 RA Nyman T.A., Toeloe H., Parkkinen J., Kalkkinen N.;  
 "Identification of nine interferon-alpha subtypes produced by Sendai  
 virus-induced human peripheral blood leucocytes.";  
 RL Biochem. J. 329:295-302 (1998).  
 RN [5]  
 RP ABSENCE OF POLYMORPHISM.  
 RX MEDLINE=97067358; PubMed=8910771;  
 RA Hussain M., Gill D.S., Liao M.-J.;  
 "Identification of interferon-alpha 7, -alpha 14, and -alpha 21  
 variants in the genome of a large human population.";  
 RL J. Interferon Cytokine Res. 16:853-859 (1996).  
 CC -1- FUNCTION: Produced by macrophages, IFN-alpha have antiviral  
 activities. Interferon stimulates the production of two enzymes: a  
 protein kinase and an oligoadenylate synthetase.  
 CC -1- SUBCELLULAR LOCATION: Secreted.  
 CC -1- SIMILARITY: Belongs to the alpha/beta interferon family.  
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration  
 between the Swiss Institute of Bioinformatics and the EMBL outstation-  
 the European Bioinformatics Institute. There are no restrictions on its  
 use as long as its content is in no way modified and this statement is not  
 removed.

DR EMBL: ML2350; AAAS2718.1; -; mRNA.  
 DR EMBL: V00540; CAA23801.1; -; mRNA.  
 DR EMBL: X00145; CAA24980.1; -; mRNA.  
 DR EMBL: BC069329; AAH69329.1; -; mRNA.  
 DR EMBL: BC069372; AAH69372.1; -; mRNA.  
 DR EMBL: BC069408; AAH69408.1; -; mRNA.  
 DR PIR: A01832; IYHUF.  
 DR PIR: 184464; 184464.  
 DR HSSP: P01563; 1ITF.  
 DR SMR: P01568; 24-189.  
 DR EMBL: ENSG00000137080; Homo sapiens.  
 DR HGNC: HGNC:5424; IFNA21.  
 DR MIM: 147584; -.  
 DR GO: GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .; TAS.  
 DR InterPro: IPR000471; Interferon abd.  
 DR PANTHER: PTHR11691; Interferon\_abd; 1.  
 DR Pfam: PF00143; Interferon; 1.  
 DR PRINTS: PR00266; INTERFERONAB.  
 DR PRODOM: PD000550; Interferon\_abd; 1.  
 DR PROSITE: PS00252; INTERFERON\_A\_B\_D; 1.  
 KW Antiviral defense; Cytokine; Direct protein sequencing;  
 KW Multigene family; Signal.  
 FT SIGNAL 1 23  
 FT CHAIN 24 189 Interferon alpha-21.  
 FT DISULFID 24 122 By similarity.  
 FT DISULFID 52 162 By similarity.  
 FT CONFLICT 119 119 L -> M (in Ref. 1).  
 FT SEQUENCE 189 AA; 21741 MM; F0B6C9C392905802 CRC64;  
 SQ  
 Query Match 90.74; Score 872; DB 1; Length 189;  
 Best Local Similarity 91.0%; Pred. No. 2.2e-67;  
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 QY 1 MALSFSILMAVLYLSYSGISGCDLPQTHSLGNRRLLILIAQGRISPSCLKDRHDFG 60  
 DB 1 MALSFSILMAVLYLSYSGISGCDLPQTHSLGNRRLLILIAQGRISPSCLKDRHDFG 60  
 QY 61 LPOEFPGNFOFKQAISVTHEMIQTFFNLFSTEDSSAAWQSILKFFSTELYQQLNLE 120  
 DB 61 FPOEFPGNFOFKQAISVTHEMIQTFFNLFSTEDSSAAWQSILKFFSTELYQQLNLE 120  
 QY 121 ACVIOGVEMETPLMNDISILAVKRYFORITLYTEKKYSPCAWEVVPRAIMRSLSPSTN 180  
 DB 121 ACVIOGVEMETPLMNDISILAVKRYFORITLYTEKKYSPCAWEVVPRAIMRSLSPSTN 180  
 QY 181 LQKLRKRD 189  
 DB 181 LQKLRKRD 189  
 QY 181 FOERLRKKE 189  
 DB 181 FOERLRKKE 189  
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 ID Q5VMD1\_HUMAN PRELIMINARY; PRT; 189 AA.  
 AC Q5VMD1;  
 DT 01-FEB-2005 (TREMBLrel. 29, Created)  
 DT 01-FEB-2005 (TREMBLrel. 29, Last sequence update)  
 DT 13-SEP-2005 (TREMBLrel. 31, Last annotation update)  
 DS Interferon, alpha 21.  
 GN Name=IFNA21; ORFNames=RP11-113D19.8-001;  
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 CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 CC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homiidae;  
 CC Homo.  
 NCBI\_TaxID=9606;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RA Martin S.;  
 RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE.  
 RC TISSUE=PCR rescued clones;  
 RX MEDLINE=2238625; PubMed=12477932; DOI=10.1073/pnas.242603899;  
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

RA Klausner R.D., Collins F.S., Wagner L., Shennan C.M., Schuler G.D.,  
 RA Altschul S.F., Zeebber B., Buetow K.H., Schaefer C.F., Bhat N.K.,  
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
 RA Diatchenko L., Marnettina K., Farmer A.A., Rubin G.M., Hong L.,  
 RA Stimpelson M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,  
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 RA Raza S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullany S.J.,  
 RA Bosak S.A., McGowan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
 RA Richards S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,  
 RA Villalón D.K., Muzny D.M., Sodergren E.U., Lu X., Gibbs R.A.,  
 RA Fahey J., Helton E., Kettelman M., Madan A., Rodrigues S., Sanchez A.,  
 RA Whitting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,  
 RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,  
 RA Butterfield V.S.N., Krzywinski M.I., Skalski U., Smallos D.E.,  
 RA Schnerch A., Schein J.E., Jones S.J.W., Marra M.A.,  
 RA "Generation and initial analysis of more than 15,000 full-length human  
 RT and mouse cDNA sequences." ;  
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).

RN [3]  
 RP NUCLEOTIDE SEQUENCE.  
 RC TISSUE=PCR rescued clones;  
 RG NIH MGC Project;  
 RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.  
 CC -1- SUBCELLULAR LOCATION: secreted (By similarity).  
 DR EMBL; AL390882; CAH70157.1; -; Genomic DNA.  
 DR EMBL; BC096699; AAH96699.1; -; mRNA.  
 DR SMR; OSVMD1; 24-189.  
 DR Ensembl; ENSG00000137080; Homo sapiens.  
 DR GO; GO:0005576; C:extracellular region; IEA.  
 DR GO; GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .; IEA.  
 DR GO; GO:0006952; P:defense response; IEA.  
 DR InterPro; IPR000471; Interferon\_abd.  
 DR Pfam; PF00143; Interferon; 1.  
 DR PRINTS; PR00266; INTERFERONAB.  
 DR SMART; SM00076; IFabd; 1.  
 DR PROSITE; PS00252; INTERFERON\_A\_B\_D; 1.  
 DR Antiviral defense; Cytokine.  
 SQ SEQUENCE 189 AA; 21741 MW; F0B6C9C392905802 CRC64;

Query Match 90.7%; Score 872; DB 2; Length 189;  
 Best Local Similarity 91.0%; Pred. No. 2.2e-67;  
 Matches 172; Conservative 6; Mismatches 11; Indels 0; Gaps 0;  
 QY 1 MALSSILMAVLYSYKISGCDLPQTHSGNRRALILIAQMGRISSPFCCLKRDHDFG 60  
 DB 1 MALSSILMAVLYSYKISGCDLPQTHSGNRRALILIAQMGRISSPFCCLKRDHDFG 60  
 QY 61 LPOEFDFGNQFOKTOAISVLHEMIQOTFNLFSTEDSSAAWESQSLLEKSTELYOQLNLE 120  
 DB 61 PPOEFDFGNQFOKTOAISVLHEMIQOTFNLFSTEDSSAAWESQSLLEKSTELYOQLNLE 120  
 QY 121 ACVIOEVGMERTPLMNEISILAVRKYFORITLYLTEKYSFPCAMEVVAEIMRSISFSTN 180  
 DB 121 ACVIOEVGMERTPLMNEISILAVRKYFORITLYLTEKYSFPCAMEVVAEIMRSISFSTN 180  
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 DB 181 FQERLRKE 189

RESULT 11  
 Q14608 HUMAN  
 ID Q14608 HUMAN PRELIMINARY; PRT; 181 AA.  
 AC Q14608;  
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 DT 01-NOV-1996 (TRENBLREL. 01; Last sequence update)  
 DT 01-MAR-2004 (TRENBLREL. 26; Last annotation update)  
 DE Leukocyte interferon-alpha.  
 OS Homo sapiens (Human).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;  
 OC Homo.

OX NCBI\_TaxID=9606;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=85056523; PubMed=6548765;  
 RA Green E., Beizin V.M., Jansone I., Tsimanis A., Vishnevsky Y.,  
 RA Apalones U.;  
 RT "Novel human leukocyte interferon subtype and structural comparison of  
 RT alpha interferon genes." ;  
 RL J Interferon Res. 4:609-617(1984).

RN [2]  
 RP NUCLEOTIDE SEQUENCE.  
 RC PubMed=3803589;  
 RX Ohara O., Teraoka H.;  
 RT "Anomalous behavior of human leukocyte interferon subtypes on  
 RT polyacrylamide gel electrophoresis in the presence of dodecyl  
 RT sulfate." ;  
 RL FEBS Lett. 211:78-82(1987).  
 CC -1- SUBCELLULAR LOCATION: secreted (By similarity).  
 DR EMBL; M28586; AAA36041.1; -; mRNA.  
 DR PIR; E25843; E25843.  
 DR PIR; I56313; I56313.  
 DR HSPD; P01563; I1TF.  
 DR SMR; Q14608; 16-181.  
 DR GO; GO:0005615; C:extracellular space; IEA.  
 DR GO; GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .; IEA.  
 DR GO; GO:0006952; P:response to virus; IEA.  
 DR InterPro; IPR000471; Interferon\_abd.  
 DR Pfam; PF00143; Interferon; 1.  
 DR PRINTS; PR00266; INTERFERONAB.  
 DR PRODOM; PD000550; Interferon\_abd; 1.  
 DR SMART; SM00076; IFabd; 1.  
 DR PROSITE; PS00252; INTERFERON\_A\_B\_D; 1.  
 KW Antiviral defense; Cytokine.  
 SQ SEQUENCE 181 AA; 20878 MW; 3DB45120764EBABC CRC64;

Query Match 87.1%; Score 837; DB 2; Length 181;  
 Best Local Similarity 90.6%; Pred. No. 2.2e-64;  
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 QY 9 MAVLYSYKISGCDLPQTHSGNRRALILIAQMGRISSPFCCLKRDHDFGLPOEERFDG 68  
 DB 1 MAVLYSYKISGCDLPQTHSGNRRALILIAQMGRISSPFCCLKRDHDFGLPOEERFDG 68  
 QY 69 NOPKTOAISVLHEMIQOTFNLFSTEDSSAAWESQSLLEKSTELYOQLNLEACVIOEVG 128  
 DB 61 NOPKTOAISVLHEMIQOTFNLFSTEDSSAAWESQSLLEKSTELYOQLNLEACVIOEVG 120  
 QY 129 MEETPLMNEISILAVRKYFORITLYLTEKYSFPCAMEVVAEIMRSISFSTNLOKIRRK 188  
 DB 121 VEETPLMNEISILAVRKYFORITLYLTEKYSFPCAMEVVAEIMRSISFSTNLOKIRRK 180  
 QY 189 D 189  
 DB 181 E 181

RESULT 12  
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 AC P05015;  
 DT 13-AUG-1987 (Rel. 05; Created)  
 DT 13-AUG-1987 (Rel. 05; Last sequence update)  
 DT 10-MAY-2005 (Rel. 47; Last annotation update)  
 DE Interferon alpha-16 precursor (Interferon alpha-WA).  
 GN Name=IFNA16;  
 OS Homo sapiens (Human).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;  
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RX MEDLINE=66037205; PubMed=4057246;  
 RA Henco K., Brosius J., Fujisawa A., Fujisawa J.-I., Haynes J.R.,  
 RA Hochstadt J., Kovacic T., Paese M., Schambeck A., Schmid J.,  
 RA Todokoro K., Waelchli M., Nagata S., Weismann C.;  
 RT "Structural relationship of human interferon alpha genes and  
 RT pseudogenes";  
 RL J. Mol. Biol. 185:227-260(1985).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=85038533; PubMed=6387705;  
 RA Torczynski R.M., Fuke M., Bollon A.P.;  
 RT "Human genomic library screened with 17-base oligonucleotide probes  
 RT yields a novel interferon gene";  
 RL Proc. Natl. Acad. Sci. U.S.A. 81:6451-6455(1984).  
 RN [3]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=85056523; PubMed=6548765;  
 RA Gren E., Berzin V.M., Jansone I., Tsimanis A., Vishnevsky Y.,  
 RA Apsalons U.;  
 RT "Novel human leukocyte interferon subtype and structural comparison of  
 RT alpha interferon genes";  
 RL J. Interferon Res. 4:609-617(1984).  
 CC -1- FUNCTION: Produced by macrophages, IFN-alpha have antiviral  
 CC activities. Interferon stimulates the production of two enzymes: a  
 CC protein kinase and an oligoadenylate synthetase.  
 CC -1- SUBCELLULAR LOCATION: Secreted.  
 CC -1- SIMILARITY: Belongs to the alpha/beta interferon family.  
 CC -----  
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration  
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -  
 CC the European Bioinformatics Institute. There are no restrictions on its  
 CC use as long as its content is in no way modified and this statement is not  
 CC removed.  
 CC -----  
 DR EMBL; X02957; CAA26703.1; -; Genomic DNA.  
 DR EMBL; K02055; AAA52727.1; -; Genomic DNA.  
 DR EMBL; M28585; AAA36042.1; -; mRNA.  
 DR PIR; G23753; IYHUI6.  
 DR HSSP; P01563; 11TF.  
 DR SMR; P05015; 24-189.  
 DR HGNC; HGNC:5421; IFNA16.  
 DR MIM; 147580; -.  
 DR GO; GO:0005132; F:interferon-alpha/beta receptor binding; TAS.  
 DR InterPro; IPR000471; Interferon\_abd.  
 DR PANTHER; PTHR11691; Interferon\_abd; 1.  
 DR Pfam; PF00143; Interferon; 1.  
 DR PRINTS; PR00266; INTERFERONAB.  
 DR ProDom; PD000550; Interferon abd; 1.  
 DR PROSITE; PS00252; INTERFERON\_A\_B\_D; 1.  
 KM Antiviral defense; Cytokine; Multigene family; Signal.  
 FT SIGNAL 1 23  
 FT CHAIN 24 189 Interferon alpha-16.  
 FT DISULFID 24 122 By similarity.  
 FT DISULFID 52 162 By similarity.  
 SQ SEQUENCE 189 AA; 21711 MW; FC6822F787F1585F CRC64;  
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 DT 01-FEB-2005 (TREMblrel. 29, Last sequence update)  
 DT 01-FEB-2005 (TREMblrel. 29, Last annotation update)  
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 OC Homo.  
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 RA Pelan S.;  
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 DR GO; GO:0006952; P:defense response; IEA.  
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 DR Pfam; PF00143; Interferon; 1.  
 DR PRINTS; PR00266; INTERFERONAB.  
 DR SMART; SMO0076; IFabd; 1.  
 DR PROSITE; PS00252; INTERFERON\_A\_B\_D; 1.  
 KM Antiviral defense; Cytokine.  
 FT SIGNAL 189 AA; 21711 MW; FC6822F787F1585F CRC64;  
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 DT 01-NOV-1996 (TREMblrel. 01, Created)  
 DT 01-NOV-1996 (TREMblrel. 01, Last sequence update)  
 DT 01-MAR-2004 (TREMblrel. 26, Last annotation update)  
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 OC Homo.  
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 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RA Gren E.Y., Berzin V.M., Tsimanis A.Y., Apsalons U.R., Vishnevskii Y.I.,

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RA Yanson I.V., Dshler A.V., Pudova N.V., Smorodintsev A.A.,
RA Iovlev V.I., Stepanov A.N., Feldman G.Y., Meldrais Y.A., Lozha V.P.,
RA Kaysan V.M., Efimov V.A., Sverdlov E.D.;
RT "A new type of leukocytic interferon.";
RL Dokl. Biochem. 269:91-95(1983).
CC -1- SUBCELLULAR LOCATION: Secreted (by similarity).
DR EMBL; X00140; CAA24970.1; -; mRNA.
DR PIR; I37584; I37584.
DR HSSP; P01563; 1ITF.
DR SMR; O14618; 24-189.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .); IEA.
DR GO; GO:0006952; P:defense response; IEA.
DR InterPro; IPR000471; Interferon_abd.
DR Pfam; PF00143; Interferon; 1.
DR PRINTS; PR00266; INTERFERONAB.
DR ProDom; PD000550; Interferon_abd; 1.
DR SMART; SM00076; IFabd; 1.
DR PROSITE; PS00252; INTERFERON_A_B_D; 1.
KW Antiviral defense; Cytokine.
SQ SEQUENCE 189 AA; 21810 MW; E6D8D9E726E04344 CRC64;

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DB 181 LOKIIRKRD 189
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DB 181 LOKIIRKRD 189

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AC P01563;
DT 21-JUL-1986 (Rel. 01, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 10-MAY-2005 (Rel. 47, Last annotation update)
DE Interferon alpha-5 precursor (Interferon alpha-G) (leif G) (Interferon
DE alpha-61)
GN Name=IFNA5;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;
OC Homo.
OX NCBI_TaxID=9606;
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RX MEDLINE=86037205; PubMed=4057246;
RA Henco K., Brosius J., Fujisawa A., Fujisawa J.-I., Haynes J.R.,
RA Hochstadt J., Kovacic T., Pasek M., Schamboeck A., Schmid J.,
RA Todokoro K., Waelchli M., Nagata S., Weissmann C.;
RT "Structural relationship of human Interferon alpha genes and
RT pseudogenes.";
RL J. Mol. Biol. 185:227-260(1985).
RN [2]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
RX PubMed=15164053; DOI=10.1038/nature02465;
RA Humphray S.J., Oliver K., Hunt A.R., Plumb R.W., Loveland J.E.,
RA Howe K.L., Andrews T.D., Searle S., Hunt S.E., Scott C.E., Jones M.C.,
RA Ainscough R., Almeida J.P., Ambrose K.D., Ashwell R.I.S.;

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RA Babbage A.K., Babbage S., Baguley C.L., Bailey J., Banerjee R.,
RA Barker D.J., Barlow K.F., Bates K., Beasley H., Beasley O., Bird C.P.,
RA Bray-Alten S., Brown A.J., Brown J.Y., Burford D., Burrill W.,
RA Burton J., Carder C., Carter N.P., Chapman J.C., Chen Y., Clarke G.,
RA Clark S.Y., Clee C.M., Clegg S., Collier R.E., Cobby N., Crosier M.,
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RA Earthrowl M.E., Faulkner L., Fleming C.J., Frankish A.,
RA Frankland J.A., French L., Fricker D.G., Garner P., Garnett J.,
RA Ghorri J., Gilbert J.G.R., Glison C., Grafham D.V., Griddle B.,
RA Griffiths C., Griffiths-Jones S., Grocock R., Guy J., Hall R.E.,
RA Hammond S., Harley J.L., Harrison E.S.I., Hart E.A., Heath P.D.,
RA Henderson C.D., Hopkins B.L., Howard P.J., Howden P.J., Huckle E.,
RA Johnson C., Johnson D., Joy A.A., Kay M., Keenan S., Kershaw J.K.,
RA Kimberley A.M., King A., Knights A., Laird G.K., Langford C.,
RA Laylor S., Leongamornlert D.A., Leverisa M., Lloyd C., Lloyd D.M.,
RA Lovell J., Martin S., Mashreght-Mohammadi M., Matthews L., McLaren S.,
RA McElay K.E., Murray A., Milne S., Nickerson T., Nisbett J.,
RA Nordalek G., Pearce A.V., Peck A.I., Porter K.M., Pandian R.,
RA Pelan S., Phillimore B., Povey S., Ramsey Y., Rand V., Scharfe M.,
RA Sehra H.K., Showkhen R., Sims S.K., Skuce C.D., Smith M.,
RA Steward C.A., Swarbreck D., Sycamore N., Tester J., Thorpe A.,
RA Tracey A., Tromans A., Thomas D.W., Wall M., Wallis J.M., West A.P.,
RA Whitehead S.L., Willey D.L., Williams S.A., Wilming L., Wray P.W.,
RA Young L., Ashurst J.L., Coulson A., Blocker H., Durbin R.,
RA Sulston J.E., Hubbard T., Jackson M.J., Bentley D.R., Beck S.,
RA Rogers J., Dunham I.;
RT "DNA sequence and analysis of human chromosome 9.";
RL Nature 429:369-374(2004).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 57-189.
RC TISSUE=Spleen;
RX MEDLINE=81148795; PubMed=6163083;
RA Goeddel D.V., Leung D.W., Dull T.J., Gross M., Lawn R.M.,
RA McCandlish R., Seeburg P.H., Ullrich A., Yelaverton E., Gray P.W.;
RT "The structure of eight distinct cloned human leukocyte interferon
RT cDNAs.";
RL Nature 290:20-26(1981).
RN [4]
RP PROTEIN SEQUENCE OF 22-36.
RX PubMed=15340161; DOI=10.1110/ps.04682504;
RA Zhang Z., Henzel W.J.;
RT "Signal peptide prediction based on analysis of experimentally
RT verified cleavage sites.";
RL Protein Sci. 13:2819-2824(2004).
CC -1- FUNCTION: Produced by macrophages, IFN-alpha have antiviral
CC activities. Interferon stimulates the production of two enzymes: a
CC protein kinase and an oligoadenylate synthetase.
CC -1- SIMILARITY: Belongs to the alpha/beta interferon family.
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC EMBL; X02956; CAA26702.1; -; Genomic DNA.
CC EMBL; AL162420; CAH73189.1; -; Genomic DNA.
CC EMBL; V00541; CAA23802.1; -; mRNA.
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CC HSSP; P01563; 1ITF.
CC SMR; P01569; 24-189.
CC Ensemble; ENSG00000147873; Homo sapiens.
CC HGNC; HGNC:5426; IFNA5.
CC MIM; 147565; -.
CC GO; GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .); TAS.
CC InterPro; IPR000471; Interferon_abd.
CC PANTHER; PTHR11691; Interferon_abd; 1.
CC Pfam; PF00143; Interferon; 1.
CC PRINTS; PR00266; INTERFERONAB.
CC ProDom; PD000550; Interferon_abd; 1.
CC PROSITE; PS00252; INTERFERON_A_B_D; 1.
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KM Multigene family; Signal.  
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GenCore version 5.1.6  
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OM protein - protein search, using sw model

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Title: US-10-691-653-2

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Published Applications AA Main:\*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

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1	961	100.0	189	4	US-10-284-740-10 Sequence 10, Appl
2	961	100.0	189	4	US-10-691-653-2 Sequence 2, Appl
3	961	100.0	189	4	US-10-676-705-13 Sequence 13, Appl
4	961	100.0	189	4	US-10-677-093-13 Sequence 13, Appl
5	961	100.0	189	5	US-10-820-467-13 Sequence 13, Appl
6	929	96.7	189	4	US-10-415-969-42 Sequence 42, Appl
7	921	95.8	189	4	US-10-415-969-44 Sequence 44, Appl
8	921	95.8	189	4	US-10-757-511-3 Sequence 3, Appl
9	919	95.6	189	4	US-10-415-969-50 Sequence 50, Appl
10	919	95.6	189	4	US-10-676-705-4 Sequence 4, Appl
11	919	95.6	189	4	US-10-677-093-4 Sequence 4, Appl
12	919	95.6	189	5	US-10-820-467-4 Sequence 4, Appl
13	917	95.4	189	3	US-09-881-050-22 Sequence 22, Appl
14	917	95.4	189	3	US-09-881-050-28 Sequence 28, Appl
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21	911	94.8	189	5	US-10-197-816-7 Sequence 7, Appl
22	910	94.7	189	4	US-10-415-969-54 Sequence 54, Appl
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42	854	88.9	166	5	US-10-714-817-41 Sequence 41, Appl
43	854	88.9	166	5	US-10-953-259-18 Sequence 18, Appl
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45	844	87.8	166	3	US-09-559-671A-77 Sequence 77, Appl

#### ALIGNMENTS

RESULT 1  
US-10-284-740-10 Application US/10284740  
; Sequence 10, Appl  
; Publication No. US20030138404A1  
; GENERAL INFORMATION:  
; APPLICANT: Maroun, Leonard E.  
; TITLE OF INVENTION: INTERFERON ANTAGONISTS USEFUL FOR THE TREATMENT OF INTERFERON REL  
; FILE REFERENCE: 18446/2002  
; CURRENT APPLICATION NUMBER: US/10/284,740  
; CURRENT FILING DATE: 2002-10-31  
; PRIOR APPLICATION NUMBER: US 09/845,260  
; PRIOR FILING DATE: 2001-04-30  
; PRIOR APPLICATION NUMBER: US 09/067,398  
; PRIOR FILING DATE: 1998-04-28  
; PRIOR APPLICATION NUMBER: US 08/502,519  
; PRIOR FILING DATE: 1995-07-14  
; NUMBER OF SEQ ID NOS: 22  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 10  
; LENGTH: 189  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
; US-10-284-740-10  
Query Match 100.0%; Score 961; DB 4; Length 189;  
Best Local Similarity 100.0%; Pred. No. 6,9e-90;  
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DB 181 LQKILRRKD 189  
RESULT 2  
US-10-691-653-2 Application US/10691653  
; Sequence 2, Appl  
; Publication No. US20040110715A1

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; GENERAL INFORMATION:
; APPLICANT: Escary, Jean-Louis
; TITLE OF INVENTION: New polynucleotides and polypeptides of the IFNa-17 gene
; FILE REFERENCE: 607/11.000024
; CURRENT APPLICATION NUMBER: US/10/691,653
; PRIOR FILING DATE: 2003-10-24
; PRIOR APPLICATION NUMBER: FR 0105516
; PRIOR FILING DATE: 2001-04-24
; PRIOR APPLICATION NUMBER: PCT/EP02/05229
; PRIOR FILING DATE: 2002-04-23
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 2
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-691-653-2
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Query Match          100.0%; Score 961; DB 4; Length 189;
Best Local Similarity 100.0%; Pred. No. 6,9e-90;
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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Oy 1 MALSFSLMAVLVLSYKISGSLGCDLPQTHSLGNRRALILLAOMGRISPFSCLDKRDHFG 60
    |||||||
Db 1 MALSFSLMAVLVLSYKISGSLGCDLPQTHSLGNRRALILLAOMGRISPFSCLDKRDHFG 60
Oy 61 LPOEFPGNOFOKTOAISVLHEMIQOTFNLFTSTEDSSAAMEQSLLEKSTELYOQLNNLE 120
    |||||||
Db 61 LPOEFPGNOFOKTOAISVLHEMIQOTFNLFTSTEDSSAAMEQSLLEKSTELYOQLNNLE 120
Oy 121 ACVIOEVGMETPLMNEDSLIAVRKYFORITLYLTEKKYSPCAWEVRAEIMRSLSFSTN 180
    |||||||
Db 121 ACVIOEVGMETPLMNEDSLIAVRKYFORITLYLTEKKYSPCAWEVRAEIMRSLSFSTN 180
Oy 181 LQKILRRKD 189
    |||||||
Db 181 LQKILRRKD 189
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RESULT 3
US-10-676-705-13
; Sequence 13, Application US/10676705
; Publication No. US20040137581A1
; GENERAL INFORMATION:
; APPLICANT: Aguinaldo, Anna Marie
; APPLICANT: Beyna, Amelia Joy
; APPLICANT: Cho, Ho Sung
; APPLICANT: Desjarlais, John Rudolph
; APPLICANT: Marshall, Shannon Alicia
; APPLICANT: Muchhal, Umesh
; APPLICANT: Villegas, Michael Francis Aquino
; APPLICANT: Zhukovsky, Eugene
; TITLE OF INVENTION: INTERFERON VARIANTS WITH IMPROVED PROPERTIES
; FILE REFERENCE: A-71431-3
; CURRENT APPLICATION NUMBER: US/10/676,705
; PRIOR FILING DATE: 2003-09-30
; PRIOR APPLICATION NUMBER: US 60/489,725
; PRIOR FILING DATE: 2003-07-24
; PRIOR APPLICATION NUMBER: US 60/477,246
; PRIOR FILING DATE: 2003-06-10
; PRIOR APPLICATION NUMBER: US 60/415,541
; PRIOR FILING DATE: 2002-10-01
; NUMBER OF SEQ ID NOS: 90
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 13
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-676-705-13
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Query Match          100.0%; Score 961; DB 4; Length 189;
Best Local Similarity 100.0%; Pred. No. 6,9e-90;
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Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Oy 1 MALSFSLMAVLVLSYKISGSLGCDLPQTHSLGNRRALILLAOMGRISPFSCLDKRDHFG 60
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Db 1 MALSFSLMAVLVLSYKISGSLGCDLPQTHSLGNRRALILLAOMGRISPFSCLDKRDHFG 60
Oy 61 LPOEFPGNOFOKTOAISVLHEMIQOTFNLFTSTEDSSAAMEQSLLEKSTELYOQLNNLE 120
    |||||||
Db 61 LPOEFPGNOFOKTOAISVLHEMIQOTFNLFTSTEDSSAAMEQSLLEKSTELYOQLNNLE 120
Oy 121 ACVIOEVGMETPLMNEDSLIAVRKYFORITLYLTEKKYSPCAWEVRAEIMRSLSFSTN 180
    |||||||
Db 121 ACVIOEVGMETPLMNEDSLIAVRKYFORITLYLTEKKYSPCAWEVRAEIMRSLSFSTN 180
Oy 181 LQKILRRKD 189
    |||||||
Db 181 LQKILRRKD 189
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RESULT 4
US-10-677-093-13
; Sequence 13, Application US/10677093
; Publication No. US20040175359A1
; GENERAL INFORMATION:
; APPLICANT: Desjarlais, John Rudolf
; APPLICANT: Marshall, Shannon Alicia
; APPLICANT: Mo, Yirong
; APPLICANT: Thomson, Adam Read
; TITLE OF INVENTION: NOVEL PROTEINS WITH ANTIVIRAL, ANTINEOPLASTIC, AND/OR
; FILE REFERENCE: 33604/US/1
; CURRENT APPLICATION NUMBER: US/10/677,093
; PRIOR FILING DATE: 2003-09-30
; PRIOR APPLICATION NUMBER: 60/425,851
; PRIOR FILING DATE: 2002-11-12
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 13
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-677-093-13
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Query Match          100.0%; Score 961; DB 4; Length 189;
Best Local Similarity 100.0%; Pred. No. 6,9e-90;
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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Oy 1 MALSFSLMAVLVLSYKISGSLGCDLPQTHSLGNRRALILLAOMGRISPFSCLDKRDHFG 60
    |||||||
Db 1 MALSFSLMAVLVLSYKISGSLGCDLPQTHSLGNRRALILLAOMGRISPFSCLDKRDHFG 60
Oy 61 LPOEFPGNOFOKTOAISVLHEMIQOTFNLFTSTEDSSAAMEQSLLEKSTELYOQLNNLE 120
    |||||||
Db 61 LPOEFPGNOFOKTOAISVLHEMIQOTFNLFTSTEDSSAAMEQSLLEKSTELYOQLNNLE 120
Oy 121 ACVIOEVGMETPLMNEDSLIAVRKYFORITLYLTEKKYSPCAWEVRAEIMRSLSFSTN 180
    |||||||
Db 121 ACVIOEVGMETPLMNEDSLIAVRKYFORITLYLTEKKYSPCAWEVRAEIMRSLSFSTN 180
Oy 181 LQKILRRKD 189
    |||||||
Db 181 LQKILRRKD 189
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RESULT 5
US-10-820-467-13
; Sequence 13, Application US/10820467
; Publication No. US20050054053A1
; GENERAL INFORMATION:
; APPLICANT: Aguinaldo, Anna Marie
; APPLICANT: Beyna, Amelia Joy
; APPLICANT: Cho, Ho Sung
; APPLICANT: Desjarlais, John Rudolph
```

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; APPLICANT: Marshall, Shannon Alicia
; APPLICANT: Muchhal, Umesh
; APPLICANT: Villegas, Michael Francis Aquino
; APPLICANT: Zhukovsky, Eugene
; APPLICANT: Quesenberry, Michael Stephen
; TITLE OF INVENTION: INTERFERON VARIANTS WITH IMPROVED PROPERTIES
; FILE REFERENCE: A-71431-4
; CURRENT APPLICATION NUMBER: US/10/820,467
; CURRENT FILING DATE: 2004-03-30
; PRIOR APPLICATION NUMBER: US 60/477,246
; PRIOR FILING DATE: 2003-06-10
; PRIOR APPLICATION NUMBER: US 60/415,541
; PRIOR FILING DATE: 2002-10-01
; PRIOR APPLICATION NUMBER: US 60/489,725
; PRIOR FILING DATE: 2003-07-24
; PRIOR APPLICATION NUMBER: US 10/676,705
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 274
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 13
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-820-467-13

Query Match          100.0%; Score 961; DB 5; Length 189;
Best Local Similarity 100.0%; Pred. No. 6.9e-90;
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MALSFSLMAVVLVSYKISGCDLPQTHSLGNRRALILLQMGRIISPFSCLDKDRHDFG 60
Db 1 MALSFSLMAVVLVSYKISGCDLPQTHSLGNRRALILLQMGRIISPFSCLDKDRHDFG 60

Qy 61 LPOEFPGDNQFOKTAQISVLHEMIQOTFNLFTSTEDSSAAMEQSILKEFSTELYOQLNMLE 120
Db 61 LPOEFPGDNQFOKTAQISVLHEMIQOTFNLFTSTEDSSAAMEQSILKEFSTELYOQLNMLE 120

Qy 121 ACVIOEVGMERTPLMNEDSLIAVRKYFORITLYLTEKYSFCAMEVVRAEIMRSLSFSTN 180
Db 121 ACVIOEVGMERTPLMNEDSLIAVRKYFORITLYLTEKYSFCAMEVVRAEIMRSLSFSTN 180

Qy 181 LQKILRRKD 189
Db 181 LQKILRRKD 189

RESULT 6
US-10-415-969-42
; Sequence 42, Application US/10415969
; Publication No. US20040105841A1
; GENERAL INFORMATION:
; APPLICANT: PBL BIOMEDICAL LABORATORIES
; TITLE OF INVENTION: INTERFERONS, USES AND COMPOSITIONS THEREO
; FILE REFERENCE: PBLI-PWO-012
; CURRENT APPLICATION NUMBER: US/10/415,969
; CURRENT FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: 60/245754
; PRIOR FILING DATE: 2000-11-03
; PRIOR APPLICATION NUMBER: 60/246234
; PRIOR FILING DATE: 2000-11-03
; NUMBER OF SEQ ID NOS: 86
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 42
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-415-969-42

Query Match          96.7%; Score 929; DB 4; Length 189;
Best Local Similarity 96.3%; Pred. No. 1.3e-86;
Matches 182; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

Qy 1 MALSFSLMAVVLVSYKISGCDLPQTHSLGNRRALILLQMGRIISPFSCLDKDRHDFG 60
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|||||
Db 1 MALSFSLMAVVLVSYKISGCDLPQTHSLGNRRALILLQMGRIISPFSCLDKDRHDFR 60
Qy 61 LPOEFPGDNQFOKTAQISVLHEMIQOTFNLFTSTEDSSAAMEQSILKEFSTELYOQLNMLE 120
Db 61 LPOEFPGDNQFOKTAQISVLHEMIQOTFNLFTSTEDSSAAMEQSILKEFSTELYOQLNMLE 120

Qy 121 ACVIOEVGMERTPLMNEDSLIAVRKYFORITLYLTEKYSFCAMEVVRAEIMRSLSFSTN 180
Db 121 ACVIOEVGMERTPLMNEDSLIAVRKYFORITLYLTEKYSFCAMEVVRAEIMRSLSFSTN 180

Qy 181 LQKILRRKD 189
Db 181 LQKILRRKD 189

RESULT 7
US-10-415-969-44
; Sequence 44, Application US/10415969
; Publication No. US20040105841A1
; GENERAL INFORMATION:
; APPLICANT: PBL BIOMEDICAL LABORATORIES
; TITLE OF INVENTION: INTERFERONS, USES AND COMPOSITIONS THEREO
; FILE REFERENCE: PBLI-PWO-012
; CURRENT APPLICATION NUMBER: US/10/415,969
; CURRENT FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: 60/245754
; PRIOR FILING DATE: 2000-11-03
; PRIOR APPLICATION NUMBER: 60/246234
; PRIOR FILING DATE: 2000-11-03
; NUMBER OF SEQ ID NOS: 86
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 44
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-415-969-44

Query Match          95.8%; Score 921; DB 4; Length 189;
Best Local Similarity 95.8%; Pred. No. 8.5e-86;
Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

Qy 1 MALSFSLMAVVLVSYKISGCDLPQTHSLGNRRALILLQMGRIISPFSCLDKDRHDFG 60
Db 1 MALSFSLMAVVLVSYKISGCDLPQTHSLGNRRALILLQMGRIISPFSCLDKDRHDFR 60

Qy 61 LPOEFPGDNQFOKTAQISVLHEMIQOTFNLFTSTEDSSAAMEQSILKEFSTELYOQLNMLE 120
Db 61 LPOEFPGDNQFOKTAQISVLHEMIQOTFNLFTSTEDSSAAMEQSILKEFSTELYOQLNMLE 120

Qy 121 ACVIOEVGMERTPLMNEDSLIAVRKYFORITLYLTEKYSFCAMEVVRAEIMRSLSFSTN 180
Db 121 ACVIOEVGMERTPLMNEDSLIAVRKYFORITLYLTEKYSFCAMEVVRAEIMRSLSFSTN 180

Qy 181 LQKILRRKD 189
Db 181 LQKILRRKD 189

RESULT 8
US-10-757-511-3
; Sequence 3, Application US/10757511
; Publication No. US20040137009A1
; GENERAL INFORMATION:
; APPLICANT: KOJIMA, SHIN-ICHI
; APPLICANT: ASAKURA, AKIRA
; APPLICANT: FUTATSUGI, TETSUAKI
; APPLICANT: OTA, YUKO
; APPLICANT: FUKUDA, YUKI
; APPLICANT: SAGARA, SHINSUKE
; TITLE OF INVENTION: NOVEL INTERFERON-ALPHA
; FILE REFERENCE: Q65369
; CURRENT APPLICATION NUMBER: US/10/757,511
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; CURRENT FILING DATE: 2004-01-15  
; PRIOR APPLICATION NUMBER: US/09/889,035  
; PRIOR FILING DATE: 2001-07-11  
; PRIOR APPLICATION NUMBER: JP 11-5138  
; PRIOR FILING DATE: 1999-01-12  
; NUMBER OF SEQ ID NOS: 7  
; SEQ ID NO 3  
; LENGTH: 189  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-757-511-3

Query Match 95.8%; Score 921; DB 4; Length 189;  
Best Local Similarity 95.8%; Pred. No. 8.5e-86;  
Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 MALSFSLMAVLYVSYKISICSLGCDLPOTHSIGNRRALILLAOMGRISPFSCLKDRHDFG 60  
DB 1 MALSFSLMAVLYVSYKISICSLGCDLPOTHSIGNRRALILLAOMGRISPFSCLKDRHDFR 60  
QY 61 LPOEFDFGNQFOKQOALSVLHEMIQOTFNLFTSTEDSSAAMBOSLLEKSTELYOQLNMLE 120  
DB 61 LPOEFDFGNQFOKQOALSVLHEMIQOTFNLFTSTEDSSAAMBOSLLEKSTELYOQLNMLE 120  
QY 121 ACVIOEVGMEETPLMNEEDSILA VRKYFORITLYLTEKYSFCAMEVVAEIMRSLSFSTN 180  
DB 121 ACVIOEVGMEETPLMNEEDSILA VRKYFORITLYLTEKYSFCAMEVVAEIMRSLSFSTN 180  
QY 181 LQKLRKRD 189  
DB 181 LQKLRKRD 189

RESULT 9  
US-10-415-969-50  
; Sequence 50, Application US/10415969  
; Publication No. US20040105841A1  
; GENERAL INFORMATION:  
; APPLICANT: PBL BIOMEDICAL LABORATORIES  
; TITLE OF INVENTION: INTERFERONS, USES AND COMPOSITIONS THEREOF  
; FILE REFERENCE: PBLI-PWO-012  
; CURRENT APPLICATION NUMBER: US/10/415,969  
; CURRENT FILING DATE: 2003-05-02  
; PRIOR APPLICATION NUMBER: 60/245754  
; PRIOR FILING DATE: 2000-11-03  
; PRIOR APPLICATION NUMBER: 60/246234  
; PRIOR FILING DATE: 2000-11-03  
; NUMBER OF SEQ ID NOS: 86  
; SOFTWARE: PatentIn version 3.1  
; SEQ ID NO 50  
; LENGTH: 189  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-415-969-50

Query Match 95.6%; Score 919; DB 4; Length 189;  
Best Local Similarity 95.8%; Pred. No. 1.4e-85;  
Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 MALSFSLMAVLYVSYKISICSLGCDLPOTHSIGNRRALILLAOMGRISPFSCLKDRHDFG 60  
DB 1 MALSFSLMAVLYVSYKISICSLGCDLPOTHSIGNRRALILLAOMGRISPFSCLKDRHDFG 60  
QY 61 LPOEFDFGNQFOKQOALSVLHEMIQOTFNLFTSTEDSSAAMBOSLLEKSTELYOQLNMLE 120  
DB 61 LPOEFDFGNQFOKQOALSVLHEMIQOTFNLFTSTEDSSAAMBOSLLEKSTELYOQLNMLE 120  
QY 121 ACVIOEVGMEETPLMNEEDSILA VRKYFORITLYLTEKYSFCAMEVVAEIMRSLSFSTN 180  
DB 121 ACVIOEVGMEETPLMNEEDSILA VRKYFORITLYLTEKYSFCAMEVVAEIMRSLSFSTN 180  
QY 181 LQKLRKRD 189  
DB 181 LQKLRKRD 189

DB 181 LQKLRKRD 189  
RESULT 10  
US-10-676-705-4  
; Sequence 4, Application US/10676705  
; Publication No. US20040137581A1  
; GENERAL INFORMATION:  
; APPLICANT: Aguinado, Anna Marie  
; APPLICANT: Beyna, Amelia Joy  
; APPLICANT: Cho, Ho Sung  
; APPLICANT: Desjarlais, John Rudolph  
; APPLICANT: Marshall, Shannon Alicia  
; APPLICANT: Muchhal, Umesh  
; APPLICANT: Villagas, Michael Francis Aquino  
; APPLICANT: Zhukovsky, Eugene  
; TITLE OF INVENTION: INTERFERON VARIANTS WITH IMPROVED PROPERTIES  
; FILE REFERENCE: A-71431-3  
; CURRENT APPLICATION NUMBER: US/10/676,705  
; CURRENT FILING DATE: 2003-09-30  
; PRIOR APPLICATION NUMBER: US 60/489,725  
; PRIOR FILING DATE: 2003-07-24  
; PRIOR APPLICATION NUMBER: US 60/477,246  
; PRIOR FILING DATE: 2003-06-10  
; PRIOR APPLICATION NUMBER: US 60/415,541  
; PRIOR FILING DATE: 2002-10-01  
; NUMBER OF SEQ ID NOS: 90  
; SOFTWARE: PatentIn version 3.2  
; SEQ ID NO 4  
; LENGTH: 189  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-676-705-4

Query Match 95.6%; Score 919; DB 4; Length 189;  
Best Local Similarity 95.8%; Pred. No. 1.4e-85;  
Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 MALSFSLMAVLYVSYKISICSLGCDLPOTHSIGNRRALILLAOMGRISPFSCLKDRHDFG 60  
DB 1 MALSFSLMAVLYVSYKISICSLGCDLPOTHSIGNRRALILLAOMGRISPFSCLKDRHDFG 60  
QY 61 LPOEFDFGNQFOKQOALSVLHEMIQOTFNLFTSTEDSSAAMBOSLLEKSTELYOQLNMLE 120  
DB 61 LPOEFDFGNQFOKQOALSVLHEMIQOTFNLFTSTEDSSAAMBOSLLEKSTELYOQLNMLE 120  
QY 121 ACVIOEVGMEETPLMNEEDSILA VRKYFORITLYLTEKYSFCAMEVVAEIMRSLSFSTN 180  
DB 121 ACVIOEVGMEETPLMNEEDSILA VRKYFORITLYLTEKYSFCAMEVVAEIMRSLSFSTN 180  
QY 181 LQKLRKRD 189  
DB 181 LQKLRKRD 189

RESULT 11  
US-10-677-093-4  
; Sequence 4, Application US/10677093  
; Publication No. US20040175359A1  
; GENERAL INFORMATION:  
; APPLICANT: Desjarlais, John Rudolf  
; APPLICANT: Marshall, Shannon Alicia  
; APPLICANT: Mc Viorng  
; APPLICANT: Thomson, Adam Read  
; TITLE OF INVENTION: NOVEL PROTEINS WITH ANTI-VIRAL, ANTI-NEOPLASTIC, AND/OR  
; FILE REFERENCE: 33604/US/1  
; CURRENT APPLICATION NUMBER: US/10/677,093  
; CURRENT FILING DATE: 2003-09-30  
; PRIOR APPLICATION NUMBER: 60/425,851  
; PRIOR FILING DATE: 2002-11-12  
; NUMBER OF SEQ ID NOS: 54  
; SOFTWARE: PatentIn version 3.2

SEQ ID NO 4  
LENGTH: 189  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-677-093-4

Query Match 95.6%; Score 919; DB 4; Length 189;  
Best Local Similarity 95.8%; Pred. No. 1.4e-85;  
Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 MALSFSLMAVVLVSYKSGCDLPQTHSLGNRRALILLAQGRISPFSCLDKRDHFG 60  
DB 1 MALSFSLMAVVLVSYKSGCDLPQTHSLGNRRALILLAQGRISPFSCLDKRDHFG 60  
QY 61 LPQEPFQGNQFOKQOALSVLHEMIQOTFNLSTEDSSAAEQSLLEKSTELYYOQNLNLE 120  
DB 61 FPEEPFQGNQFOKQOALSVLHEMIQOTFNLSTEDSSAAEQSLLEKSTELYYOQNLNLE 120  
QY 121 ACVQGVGVEETPLMNEDSLAVRKYFORITLVLTCKYSCAMEVYRAEIMRSLSFSTN 180  
DB 121 ACVQGVGVEETPLMNEDSLAVRKYFORITLVLTCKYSCAMEVYRAEIMRSLSFSTN 180  
QY 181 LQKRLRRKD 189  
DB 181 LQKRLRRKD 189

RESULT 12  
US-10-820-467-4  
Sequence 4, Application US/10820467  
Publication No. US20050054053A1  
GENERAL INFORMATION:  
APPLICANT: Aguinaldo, Anna Marie  
APPLICANT: Beyna, Amelia Joy  
APPLICANT: Cho, Ho Sung  
APPLICANT: Desjarlais, John Rudolph  
APPLICANT: Marshall, Shannon Alicia  
APPLICANT: Muchhal, Umesh  
APPLICANT: Villagas, Michael Francis Aquino  
APPLICANT: Zhukovsky, Eugene  
APPLICANT: Queenberry, Michael Stephen  
TITLE OF INVENTION: INTERFERON VARIANTS WITH IMPROVED PROPERTIES  
FILE REFERENCE: A-71431-4  
CURRENT APPLICATION NUMBER: US/10/820,467  
CURRENT FILING DATE: 2004-03-30  
PRIOR APPLICATION NUMBER: US 60/477,246  
PRIOR FILING DATE: 2003-06-10  
PRIOR APPLICATION NUMBER: US 60/415,541  
PRIOR FILING DATE: 2002-10-01  
PRIOR APPLICATION NUMBER: US 60/489,725  
PRIOR FILING DATE: 2003-07-24  
PRIOR APPLICATION NUMBER: US 10/676,705  
PRIOR FILING DATE: 2003-09-30  
NUMBER OF SEQ ID NOS: 274  
SOFTWARE: PatentIn version 3.2  
SEQ ID NO 4  
LENGTH: 189  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-820-467-4

Query Match 95.6%; Score 919; DB 5; Length 189;  
Best Local Similarity 95.8%; Pred. No. 1.4e-85;  
Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;  
QY 1 MALSFSLMAVVLVSYKSGCDLPQTHSLGNRRALILLAQGRISPFSCLDKRDHFG 60  
DB 1 MALSFSLMAVVLVSYKSGCDLPQTHSLGNRRALILLAQGRISPFSCLDKRDHFG 60  
QY 61 LPQEPFQGNQFOKQOALSVLHEMIQOTFNLSTEDSSAAEQSLLEKSTELYYOQNLNLE 120  
DB 61 FPEEPFQGNQFOKQOALSVLHEMIQOTFNLSTEDSSAAEQSLLEKSTELYYOQNLNLE 120

QY 121 ACVQGVGVEETPLMNEDSLAVRKYFORITLVLTCKYSCAMEVYRAEIMRSLSFSTN 180  
DB 121 ACVQGVGVEETPLMNEDSLAVRKYFORITLVLTCKYSCAMEVYRAEIMRSLSFSTN 180  
QY 181 LQKRLRRKD 189  
DB 181 LQKRLRRKD 189

RESULT 13  
US-09-881-050-22  
Sequence 22, Application US/09881050  
Publication No. US20020025304A1  
GENERAL INFORMATION:  
APPLICANT: CROZE, EDWARD M.  
APPLICANT: FAUDS, DARYL  
APPLICANT: WAGNER, T. CHARIS  
TITLE OF INVENTION: NOVEL INTERFERON FOR THE TREATMENT OF MULTIPLE  
FILE REFERENCE: BERLX-88  
CURRENT APPLICATION NUMBER: US/09/881,050  
CURRENT FILING DATE: 2001-06-15  
PRIOR APPLICATION NUMBER: 60/212,046  
PRIOR FILING DATE: 2000-06-16  
NUMBER OF SEQ ID NOS: 30  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 22  
LENGTH: 189  
TYPE: PRT  
ORGANISM: Unknown Organism  
FEATURE:  
OTHER INFORMATION: Description of Unknown Organism: Irfnalphab amino  
US-09-881-050-22

Query Match 95.4%; Score 917; DB 3; Length 189;  
Best Local Similarity 95.8%; Pred. No. 2.2e-85;  
Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 MALSFSLMAVVLVSYKSGCDLPQTHSLGNRRALILLAQGRISPFSCLDKRDHFG 60  
DB 1 MALSFSLMAVVLVSYKSGCDLPQTHSLGNRRALILLAQGRISPFSCLDKRDHFG 60  
QY 61 LPQEPFQGNQFOKQOALSVLHEMIQOTFNLSTEDSSAAEQSLLEKSTELYYOQNLNLE 120  
DB 61 FPEEPFQGNQFOKQOALSVLHEMIQOTFNLSTEDSSAAEQSLLEKSTELYYOQNLNLE 120  
QY 121 ACVQGVGVEETPLMNEDSLAVRKYFORITLVLTCKYSCAMEVYRAEIMRSLSFSTN 180  
DB 121 ACVQGVGVEETPLMNEDSLAVRKYFORITLVLTCKYSCAMEVYRAEIMRSLSFSTN 180  
QY 181 LQKRLRRKD 189  
DB 181 LQKRLRRKD 189

RESULT 14  
US-09-881-050-28  
Sequence 28, Application US/09881050  
Publication No. US20020025304A1  
GENERAL INFORMATION:  
APPLICANT: CROZE, EDWARD M.  
APPLICANT: FAUDS, DARYL  
APPLICANT: WAGNER, T. CHARIS  
TITLE OF INVENTION: NOVEL INTERFERON FOR THE TREATMENT OF MULTIPLE  
FILE REFERENCE: BERLX-88  
CURRENT APPLICATION NUMBER: US/09/881,050  
CURRENT FILING DATE: 2001-06-15  
PRIOR APPLICATION NUMBER: 60/212,046  
PRIOR FILING DATE: 2000-06-16  
NUMBER OF SEQ ID NOS: 30  
SOFTWARE: PatentIn Ver. 2.1



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## OM protein - protein search, using sw model

Run on: December 15, 2005, 13:31:14 ; Search time 12 Seconds

(Without alignments)  
106.073 Million cell updates/sec

Title: US-10-691-653-2

Sequence: 1 MALSFSLMVLVSTYSIC.....EIMRSLSFSTNLOKILRRKD 189

## Scoring table:

BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 51463 seqs, 6734788 residues

Total number of hits satisfying chosen parameters: 51463

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000Post-processing: Minimum Match 0%  
Maximum Match 100%

Listing first 45 summaries

## Database :

Published Applications AA New:\*  
1: /cgn2\_6/ptodata/2/pubpaa/US09\_NEM\_PUB.pep.\*  
2: /cgn2\_6/ptodata/2/pubpaa/US06\_NEM\_PUB.pep.\*  
3: /cgn2\_6/ptodata/2/pubpaa/US07\_NEM\_PUB.pep.\*  
4: /cgn2\_6/ptodata/2/pubpaa/US08\_NEM\_PUB.pep.\*  
5: /cgn2\_6/ptodata/2/pubpaa/PC1\_NEM\_PUB.pep.\*  
6: /cgn2\_6/ptodata/2/pubpaa/US10\_NEM\_PUB.pep.\*  
7: /cgn2\_6/ptodata/2/pubpaa/US11\_NEM\_PUB.pep.\*  
8: /cgn2\_6/ptodata/2/pubpaa/US66\_NEM\_PUB.pep.\*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	854	88.9	166	7	US-11-132-722-56 Sequence 56, Appl
2	810	84.3	166	7	US-11-132-722-48 Sequence 48, Appl
3	810	84.3	166	7	US-11-132-722-53 Sequence 53, Appl
4	785	81.7	166	7	US-11-132-722-51 Sequence 51, Appl
5	777	80.9	167	7	US-11-132-722-58 Sequence 58, Appl
6	770.5	80.2	415	7	US-11-029-003-12 Sequence 12, Appl
7	770.5	80.2	423	7	US-11-029-003-10 Sequence 10, Appl
8	770.5	80.2	430	7	US-11-029-003-22 Sequence 22, Appl
9	770.5	80.2	669	7	US-11-053-100-39 Sequence 39, Appl
10	765	79.6	166	7	US-11-132-722-57 Sequence 57, Appl
11	743	77.3	166	7	US-11-132-722-49 Sequence 49, Appl
12	736	76.6	166	7	US-11-132-722-54 Sequence 54, Appl
13	730	76.0	166	7	US-11-132-722-44 Sequence 44, Appl
14	726	75.5	166	7	US-11-132-722-55 Sequence 55, Appl
15	726	75.5	166	7	US-11-132-722-36 Sequence 36, Appl
16	724	75.3	166	7	US-11-132-722-32 Sequence 32, Appl
17	724	75.3	166	7	US-11-132-722-37 Sequence 37, Appl
18	724	75.3	166	7	US-11-132-722-43 Sequence 43, Appl
19	720	74.9	166	7	US-11-132-722-5 Sequence 5, Appl
20	720	74.9	166	7	US-11-132-722-41 Sequence 41, Appl
21	719	74.8	166	7	US-11-132-722-40 Sequence 40, Appl
22	718	74.7	166	7	US-11-132-722-33 Sequence 33, Appl
23	718	74.7	166	7	US-11-132-722-42 Sequence 42, Appl
24	717	74.6	166	7	US-11-132-722-3 Sequence 3, Appl
25	716	74.5	166	7	US-11-132-722-35 Sequence 35, Appl

26	715	74.4	166	7	US-11-132-722-6 Sequence 6, Appl
27	712	74.1	166	7	US-11-132-722-30 Sequence 30, Appl
28	712	74.1	166	7	US-11-132-722-31 Sequence 31, Appl
29	711	74.0	166	7	US-11-132-722-4 Sequence 4, Appl
30	711	74.0	166	7	US-11-132-722-29 Sequence 29, Appl
31	710	73.9	166	7	US-11-132-722-17 Sequence 17, Appl
32	710	73.9	166	7	US-11-132-722-39 Sequence 39, Appl
33	709	73.8	166	7	US-11-132-722-8 Sequence 8, Appl
34	707	73.6	166	7	US-11-132-722-9 Sequence 9, Appl
35	707	73.6	166	7	US-11-132-722-16 Sequence 16, Appl
36	707	73.6	166	7	US-11-132-722-34 Sequence 34, Appl
37	705	73.4	166	7	US-11-132-722-2 Sequence 2, Appl
38	705	73.4	166	7	US-11-132-722-21 Sequence 21, Appl
39	705	73.4	166	7	US-11-132-722-28 Sequence 28, Appl
40	704	73.3	166	7	US-11-132-722-1 Sequence 1, Appl
41	704	73.3	166	7	US-11-132-722-12 Sequence 12, Appl
42	704	73.3	166	7	US-11-132-722-38 Sequence 38, Appl
43	703	73.2	166	7	US-11-132-722-19 Sequence 19, Appl
44	702	73.0	166	7	US-11-132-722-15 Sequence 15, Appl
45	701	72.9	166	7	US-11-132-722-11 Sequence 11, Appl

## ALIGNMENTS

```
RESULT 1
US-11-132-722-56
; Sequence 56, Application US/11132722
; Publication No. US20050266465A1
; GENERAL INFORMATION:
; APPLICANT: Patten, Phillip A., et al.
; TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND
; FILE REFERENCE: 0280.310US
; CURRENT FILING DATE: 2005-05-18
; PRIOR APPLICATION NUMBER: US 60/572,504
; PRIOR FILING DATE: 2004-05-19
; NUMBER OF SEQ ID NOS: 90
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 56
; LENGTH: 166
; TYPE: PRT
; ORGANISM: homo sapiens
US-11-132-722-56

Query Match      88.9%; Score 854; DB 7; Length 166;
Best Local Similarity 100.0%; Pred. No. 3.8e-76;
Matches 166; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      24 CDLPQTHSLGNRRALLILIAQMGRIISPSCLKDRHDFGLPQEPFGNGQFOKQATSVLHEM 83
      |||||||
DB      1 CDLPQTHSLGNRRALLILIAQMGRIISPSCLKDRHDFGLPQEPFGNGQFOKQATSVLHEM 60
      |||||||

QY      84 IOGFNFSTEDSSAANEOSLLEKSTELYQQLNNLEACVIOEYGMESTPLMNEDSLILAV 143
      |||||||
DB      61 IOGFNFSTEDSSAANEOSLLEKSTELYQQLNNLEACVIOEYGMESTPLMNEDSLILAV 120
      |||||||

QY      144 RKYFORITLVLTETKYSFCAMEVVRABIMRSLSFSTNLOKILRRKD 189
      |||||||
DB      121 RKYFORITLVLTETKYSFCAMEVVRABIMRSLSFSTNLOKILRRKD 166
      |||||||

RESULT 2
US-11-132-722-48
; Sequence 48, Application US/11132722
; Publication No. US20050266465A1
; GENERAL INFORMATION:
; APPLICANT: Patten, Phillip A., et al.
; TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND
; FILE REFERENCE: 0280.310US
; CURRENT APPLICATION NUMBER: US/11/132,722
```

```
; CURRENT FILING DATE: 2005-05-18
; PRIOR APPLICATION NUMBER: US 60/572,504
; PRIOR FILING DATE: 2004-05-19
; NUMBER OF SEQ ID NOS: 90
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 48
; LENGTH: 166
; TYPE: PRT
; ORGANISM: homo sapiens
US-11-132-722-48
```

```
Query Match      84.3%; Score 810; DB 7; Length 166;
Best Local Similarity 95.2%; Pred. No. 6.9e-72;
Matches 158; Conservative 4; Mismatches 4; Indels 0; Gaps 0;
```

```
QY 24 CDLPQTHSLGNRRALILIAQWGRISPFSCDKDRHDFGLPOEEFDGNOFOKQAISVLHEM 83
DB 1 CDLPQTHSLGNRRALILIAQWGRISPFSCDKDRHDFGLPOEEFDGNOFOKQAISVLHEM 60
QY 84 IQQTFNLSTEDSSAAMEQSLEKSTELVYQQLNNLEACVIOEYGMETPLMNEDSLILAV 143
DB 61 IQQTFNLSTEDSSAAMEQSLEKSTELVYQQLNNLEACVIOEYGMETPLMNEDSLILAV 120
QY 144 RKYFORITLYLTKKYSPCAMEVVRAEIMRSLSFSTNLQKILRRKD 189
DB 121 RKYFORITLYLTKKYSPCAMEVVRAEIMRSLSFSTNLQKILRRKD 166
```

```
RESULT 3
US-11-132-722-53
; Sequence 53, Application US/11132722
; Publication No. US20050266465A1
; GENERAL INFORMATION:
; APPLICANT: Patcen, Phillip A., et al.
; TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND
; FILE REFERENCE: 0280.310US
; CURRENT APPLICATION NUMBER: US/11/132,722
; CURRENT FILING DATE: 2005-05-18
; PRIOR APPLICATION NUMBER: US 60/572,504
; PRIOR FILING DATE: 2004-05-19
; NUMBER OF SEQ ID NOS: 90
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 53
; LENGTH: 166
; TYPE: PRT
; ORGANISM: homo sapiens
US-11-132-722-53
```

```
Query Match      84.3%; Score 810; DB 7; Length 166;
Best Local Similarity 94.6%; Pred. No. 6.9e-72;
Matches 157; Conservative 4; Mismatches 5; Indels 0; Gaps 0;
```

```
QY 24 CDLPQTHSLGNRRALILIAQWGRISPFSCDKDRHDFGLPOEEFDGNOFOKQAISVLHEM 83
DB 1 CDLPQTHSLGNRRALILIAQWGRISPFSCDKDRHDFGLPOEEFDGNOFOKQAISVLHEM 60
QY 84 IQQTFNLSTEDSSAAMEQSLEKSTELVYQQLNNLEACVIOEYGMETPLMNEDSLILAV 143
DB 61 IQQTFNLSTEDSSAAMEQSLEKSTELVYQQLNNLEACVIOEYGMETPLMNEDSLILAV 120
QY 144 RKYFORITLYLTKKYSPCAMEVVRAEIMRSLSFSTNLQKILRRKD 189
DB 121 RKYFORITLYLTKKYSPCAMEVVRAEIMRSLSFSTNLQKILRRKD 166
```

```
RESULT 4
US-11-132-722-51
; Sequence 51, Application US/11132722
; Publication No. US20050266465A1
; GENERAL INFORMATION:
; APPLICANT: Patcen, Phillip A., et al.
; TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND
```

```
; TITLE OF INVENTION: CONJUGATES
; FILE REFERENCE: 0280.310US
; CURRENT APPLICATION NUMBER: US/11/132,722
; CURRENT FILING DATE: 2005-05-18
; PRIOR APPLICATION NUMBER: US 60/572,504
; PRIOR FILING DATE: 2004-05-19
; NUMBER OF SEQ ID NOS: 90
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 51
; LENGTH: 166
; TYPE: PRT
; ORGANISM: homo sapiens
US-11-132-722-51
```

```
Query Match      81.7%; Score 785; DB 7; Length 166;
Best Local Similarity 92.2%; Pred. No. 1.8e-63;
Matches 153; Conservative 6; Mismatches 7; Indels 0; Gaps 0;
```

```
QY 24 CDLPQTHSLGNRRALILIAQWGRISPFSCDKDRHDFGLPOEEFDGNOFOKQAISVLHEM 83
DB 1 CDLPQTHSLGNRRALILIAQWGRISPFSCDKDRHDFGLPOEEFDGNOFOKQAISVLHEM 60
QY 84 IQQTFNLSTEDSSAAMEQSLEKSTELVYQQLNNLEACVIOEYGMETPLMNEDSLILAV 143
DB 61 IQQTFNLSTEDSSAAMEQSLEKSTELVYQQLNNLEACVIOEYGMETPLMNEDSLILAV 120
QY 144 RKYFORITLYLTKKYSPCAMEVVRAEIMRSLSFSTNLQKILRRKD 189
DB 121 RKYFORITLYLTKKYSPCAMEVVRAEIMRSLSFSTNLQKILRRKD 166
```

```
RESULT 5
US-11-132-722-58
; Sequence 58, Application US/11132722
; Publication No. US20050266465A1
; GENERAL INFORMATION:
; APPLICANT: Patcen, Phillip A., et al.
; TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND
; FILE REFERENCE: 0280.310US
; CURRENT APPLICATION NUMBER: US/11/132,722
; CURRENT FILING DATE: 2005-05-18
; PRIOR APPLICATION NUMBER: US 60/572,504
; PRIOR FILING DATE: 2004-05-19
; NUMBER OF SEQ ID NOS: 90
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 58
; LENGTH: 167
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Construct IFN-alpha Conl
US-11-132-722-58
```

```
Query Match      80.9%; Score 777; DB 7; Length 167;
Best Local Similarity 90.4%; Pred. No. 1.1e-68;
Matches 150; Conservative 8; Mismatches 8; Indels 0; Gaps 0;
```

```
QY 24 CDLPQTHSLGNRRALILIAQWGRISPFSCDKDRHDFGLPOEEFDGNOFOKQAISVLHEM 83
DB 2 CDLPQTHSLGNRRALILIAQWGRISPFSCDKDRHDFGLPOEEFDGNOFOKQAISVLHEM 61
QY 84 IQQTFNLSTEDSSAAMEQSLEKSTELVYQQLNNLEACVIOEYGMETPLMNEDSLILAV 143
DB 62 IQQTFNLSTEDSSAAMEQSLEKSTELVYQQLNNLEACVIOEYGMETPLMNEDSLILAV 121
QY 144 RKYFORITLYLTKKYSPCAMEVVRAEIMRSLSFSTNLQKILRRKD 189
DB 122 RKYFORITLYLTKKYSPCAMEVVRAEIMRSLSFSTNLQKILRRKD 167
```

```
RESULT 6
US-11-029-003-12
```



```
; Sequence 12, Application US/11029003
; Publication No. US20050260194A1
; GENERAL INFORMATION:
; APPLICANT: PETERS, ROBERT T.
; APPLICANT: MEZO, ADAM R.
; APPLICANT: RIVERA, DANIEL S.
; APPLICANT: BITONTI, ALAN J.
; APPLICANT: STATTEL, JAMES
; TITLE OF INVENTION: IMMUNOGLOBULIN CHIMERIC MONOMER-DIMER HYBRIDS
; FILE REFERENCE: 08945.0007-01000
; CURRENT APPLICATION NUMBER: US/11/029,003
; CURRENT FILING DATE: 2005-01-05
; PRIOR APPLICATION NUMBER: 60/539,207
; PRIOR FILING DATE: 2004-01-26
; PRIOR APPLICATION NUMBER: 60/487,964
; PRIOR FILING DATE: 2003-07-17
; PRIOR APPLICATION NUMBER: 60/469,600
; PRIOR FILING DATE: 2003-05-06
; NUMBER OF SEQ ID NOS: 91
; SOFTWARE: PatentIn Ver. 3.2
; SEQ ID NO 12
; LENGTH: 415
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: Construct
US-11-029-003-12
```

```
Query Match      80.2%; Score 770.5; DB 7; Length 415;
Best Local Similarity 80.4%; Pred. No. 1.5e-67;
Matches 152; Conservative 17; Mismatches 19; Indels 1; Gaps 1;

Qy      1 MALSFSLMAVLYVSYSGSLGCDLPQTHSLGNRRALLILAQNGRISPFSCDKDRHDFG 60
      1 MALTFALLVALLVYSSCSGCVGCDLPQTHSLGSRRTMLAQMRRISLFSCLDRHDFG 60
Db      1 MALTFALLVALLVYSSCSGCVGCDLPQTHSLGSRRTMLAQMRRISLFSCLDRHDFG 60

Qy      61 LPQEPFGNQFOKQALSVLHEMIQQTENLFSTEDSSAAMWQSILKEFSTELYQQLNMLE 120
      61 PPOBEF-GNQFOKQETIPVHEMIQQIFNLFSTEDSSAAMWQETLIDKRYTELQQLNDLE 119
Db      61 PPOBEF-GNQFOKQETIPVHEMIQQIFNLFSTEDSSAAMWQETLIDKRYTELQQLNDLE 119

Qy      121 ACVIOGVGMETPLMNEDSLAVRKYFORITLYLTEKYSPCAWEVVRAEIMRSLSPSTN 180
      121 ACVIOGVGMETPLMNEDSLAVRKYFORITLYLTEKYSPCAWEVVRAEIMRSLSPSTN 180
Db      120 ACVIOGVGMETPLMNEDSLAVRKYFORITLYLTEKYSPCAWEVVRAEIMRSLSPSTN 179

Qy      181 LQKILRRKD 189
      181 LQESLRKE 188
Db      180 LQESLRKE 188
```

```
RESULT 7
US-11-029-003-10
; Sequence 10, Application US/11029003
; Publication No. US20050260194A1
; GENERAL INFORMATION:
; APPLICANT: PETERS, ROBERT T.
; APPLICANT: MEZO, ADAM R.
; APPLICANT: RIVERA, DANIEL S.
; APPLICANT: BITONTI, ALAN J.
; APPLICANT: STATTEL, JAMES
; TITLE OF INVENTION: IMMUNOGLOBULIN CHIMERIC MONOMER-DIMER HYBRIDS
; FILE REFERENCE: 08945.0007-01000
; CURRENT APPLICATION NUMBER: US/11/029,003
; CURRENT FILING DATE: 2005-01-05
; PRIOR APPLICATION NUMBER: 60/539,207
; PRIOR FILING DATE: 2004-01-26
; PRIOR APPLICATION NUMBER: 60/487,964
; PRIOR FILING DATE: 2003-07-17
; PRIOR APPLICATION NUMBER: 60/469,600
; PRIOR FILING DATE: 2003-05-06
; NUMBER OF SEQ ID NOS: 91
; SOFTWARE: PatentIn Ver. 3.2
; SEQ ID NO 10
```

```
; LENGTH: 423
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: Construct
US-11-029-003-10
```

```
Query Match      80.2%; Score 770.5; DB 7; Length 423;
Best Local Similarity 80.4%; Pred. No. 1.5e-67;
Matches 152; Conservative 17; Mismatches 19; Indels 1; Gaps 1;

Qy      1 MALSFSLMAVLYVSYSGSLGCDLPQTHSLGNRRALLILAQNGRISPFSCDKDRHDFG 60
      1 MALTFALLVALLVYSSCSGCVGCDLPQTHSLGSRRTMLAQMRRISLFSCLDRHDFG 60
Db      1 MALTFALLVALLVYSSCSGCVGCDLPQTHSLGSRRTMLAQMRRISLFSCLDRHDFG 60

Qy      61 LPQEPFGNQFOKQALSVLHEMIQQTENLFSTEDSSAAMWQSILKEFSTELYQQLNMLE 120
      61 PPOBEF-GNQFOKQETIPVHEMIQQIFNLFSTEDSSAAMWQETLIDKRYTELQQLNDLE 119
Db      61 PPOBEF-GNQFOKQETIPVHEMIQQIFNLFSTEDSSAAMWQETLIDKRYTELQQLNDLE 119

Qy      121 ACVIOGVGMETPLMNEDSLAVRKYFORITLYLTEKYSPCAWEVVRAEIMRSLSPSTN 180
      121 ACVIOGVGMETPLMNEDSLAVRKYFORITLYLTEKYSPCAWEVVRAEIMRSLSPSTN 180
Db      120 ACVIOGVGMETPLMNEDSLAVRKYFORITLYLTEKYSPCAWEVVRAEIMRSLSPSTN 179

Qy      181 LQKILRRKD 189
      181 LQESLRKE 188
Db      180 LQESLRKE 188
```

```
RESULT 8
US-11-029-003-22
; Sequence 22, Application US/11029003
; Publication No. US20050260194A1
; GENERAL INFORMATION:
; APPLICANT: PETERS, ROBERT T.
; APPLICANT: MEZO, ADAM R.
; APPLICANT: RIVERA, DANIEL S.
; APPLICANT: BITONTI, ALAN J.
; APPLICANT: STATTEL, JAMES
; TITLE OF INVENTION: IMMUNOGLOBULIN CHIMERIC MONOMER-DIMER HYBRIDS
; FILE REFERENCE: 08945.0007-01000
; CURRENT APPLICATION NUMBER: US/11/029,003
; CURRENT FILING DATE: 2005-01-05
; PRIOR APPLICATION NUMBER: 60/539,207
; PRIOR FILING DATE: 2004-01-26
; PRIOR APPLICATION NUMBER: 60/487,964
; PRIOR FILING DATE: 2003-07-17
; PRIOR APPLICATION NUMBER: 60/469,600
; PRIOR FILING DATE: 2003-05-06
; NUMBER OF SEQ ID NOS: 91
; SOFTWARE: PatentIn Ver. 3.2
; SEQ ID NO 22
; LENGTH: 430
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: Construct
US-11-029-003-22
```

```
Query Match      80.2%; Score 770.5; DB 7; Length 430;
Best Local Similarity 80.4%; Pred. No. 1.6e-67;
Matches 152; Conservative 17; Mismatches 19; Indels 1; Gaps 1;

Qy      1 MALSFSLMAVLYVSYSGSLGCDLPQTHSLGNRRALLILAQNGRISPFSCDKDRHDFG 60
      1 MALTFALLVALLVYSSCSGCVGCDLPQTHSLGSRRTMLAQMRRISLFSCLDRHDFG 60
Db      1 MALTFALLVALLVYSSCSGCVGCDLPQTHSLGSRRTMLAQMRRISLFSCLDRHDFG 60

Qy      61 LPQEPFGNQFOKQALSVLHEMIQQTENLFSTEDSSAAMWQSILKEFSTELYQQLNMLE 120
      61 PPOBEF-GNQFOKQETIPVHEMIQQIFNLFSTEDSSAAMWQETLIDKRYTELQQLNDLE 119
Db      61 PPOBEF-GNQFOKQETIPVHEMIQQIFNLFSTEDSSAAMWQETLIDKRYTELQQLNDLE 119

Qy      121 ACVIOGVGMETPLMNEDSLAVRKYFORITLYLTEKYSPCAWEVVRAEIMRSLSPSTN 180
```

```

Db      120 ACYIQGVETETLMKEDSILAVRKYPQRIUYLEKRTSPCAEYVAEIMRSFSLTN 179
      |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Qy      181 LOKILRRKD 189
      ||:||||:
Db      180 LQESLSRKE 188

```

## RESULT 9

```

US-11-053-100-39
Sequence 39. Application US/11053100
Publication No. US2005025554A1
GENERAL INFORMATION:
APPLICANT: CHIKKOTI, Ashutosh
TITLE OF INVENTION: FUSION PEPTIDES ISOLATABLE BY PHASE TRANSITION
FILE REFERENCE: 4176-101 CIP
CURRENT APPLICATION NUMBER: US/11/053,100
CURRENT FILING DATE: 2005-02-08
PRIORITY APPLICATION NUMBER: US 09/812,382
PRIORITY FILING DATE: 2001-03-20
PRIORITY APPLICATION NUMBER: US 60/190,659
PRIORITY FILING DATE: 2000-03-20
NUMBER OF SEQ ID NOS: 58
SOFTWARE: PatentIn version 3.3
SEQ ID NO 39
LENGTH: 669
TYPE: PRT
ORGANISM: Artificial
FEATURE:
OTHER INFORMATION: Synthetic Construct
FEATURE:
NAME/KEY: MISC FEATURE
LOCATION: (1)..(669)
OTHER INFORMATION: pET32a-SD11-ELP1-90-3hrom-Interferon Alpha 2B
US-11-053-100-39

```

Query Match	80.2%	Score 770.5;	DB 7;	Length 669;
Best Local Similarity	80.4%	Pred. No. 2.8e-67;		
Matches 152;	Conservative 17;	Mismatches 19;	Indels 1;	Gaps 1;

```
QY MALSPSLTALVAVLYSKVSCISGCDLPQTHSGGNRRALITLAAQGRISPECLDHRDPG 60
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
Db MALFTALVALVALLSKSCSSVGCDDPQTHSGSRRTIMLAAQMRRLSLSPCLDHRDPG 5411
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
QY LPOEFPDGNQFOKTOAISVLHEMIQOTFNLFTSTEDSSAAWESLLEKESTELYQALNLE 120
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
Db FPOEFP-GNQFOKAELTIPVLHEMIQOIFLFLPSTKSSAAWETLLDKYTELTYQALNLE 6000
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
QY ACYIQEYGVMEETPLMNEEDSILAVRKYFORITLYLTEKKYSPQCAWVRAEIMRSLSTSN 1800
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
Db ACYIQGVGVTEPLMNEEDSILAVRKYFORITLYLTEKKYSPCAWVRAEIMRSLSTSN 6601
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
QY LOKILRRKD 189
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
Db LQESLSRKE 669
   |||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
```

RESULT 10  
US-11-132-722-57

Sequence 57, Application US/11132722  
Publication No. US2005026665A1  
GENERAL INFORMATION:  
APPLICANT: Patten, Phillip A., et al.  
TITLE OF INVENTION: INTERPOL-ALPHA POLYPEPTIDES AND  
FILE OF INVENTION: CONUGATES  
FILE REFERENCE: 0280.110US  
CURRENT APPLICATION NUMBER: US/11/132,722  
CURRENT FILING DATE: 2005-05-18  
PRIOR APPLICATION NUMBER: US 60/572,504  
PRIOR FILING DATE: 2004-05-19  
NUMBER OF SEQ ID NOS: 90  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 57

```

; LENGTH: 166
; TYPE: PRT
; ORGANISM: homo sapiens
US-11-132-722-57

```

Query Match	79.6%	Score 765;	DB 7;	Length 166;
Best Local Similarity	89.8%	Pred. No. 1.6e-67;		
Matches 149; Conservative	6;	Mismatches 11;	Indels 0;	Gaps 0;

QY 24 CDDPQTHSGNRRALLTLAQMGRIIPFSCLDNRHFGIIPQEPFGONGFOKTAQISVTHEM 83

Db 1 CDDPQTHSGNRRALLTLAQMGRIIPFSCLDNRHFGIIPQEPFGONGFOKTAQISVTHEM 60

QY 84 IQOTFNLSTEDSSAABQSLLEKSTSTLYOQNLNLEACVIOEAGMEETPLMNDSTILAV 1.43

Db 61 IQOTFNLSTEDSSAABQSLLEKSTSTLYOQNLNLEACVIOEAGMEETPLMNDSTILAV 1.20

QY 144 RKYFORITLYLTKKYSPCAMEVVAETMRSLSPSTNLOKILRKXD 189

Db 121 RKYFORITLYLTKKYSPCAMEVVAETMRSLSPSTNLOKILRKXD 166

RESULT 11  
US-11-132-722-49

```

: Sequence 49, Application US/11137322
: Publication No. US20050266465A1
: GENERAL INFORMATION:
: APPLICANT: Paten, Philip A., et al.
: TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND
: TITLE OF INVENTION: CONUGATES
: FILE REFERENCE: 0280.310US
: CURRENT APPLICATION NUMBER: US-11/132,722
: CURRENT FILING DATE: 2005-05-18
: PRIOR APPLICATION NUMBER: US 60/572,504
: PRIOR FILING DATE: 2004-05-19
: NUMBER OF SEQ ID NOS: 90
: SOFTWARE: FastSeq for Windows Version 4.0
: SEQ ID NO 49
: LENGTH: 166
: TYPE: PRT
: ORGANISM: homo sapiens
: US-11-132-722-49

```

Query Match	77.3%;	Score 743;	DB 7;	Length 166;
Best Local Similarity	83.7%;	Pred. No. 2.1e-65;		
Matches 139;	Conservative 15;	Mismatches 12;	Indels 0;	Gaps 0;

Qy	21	C	D	L	P	O	H	S	I	G	N	R	A	I	L	L	A	O	M	R	I	S	P	F	C	L	D	R	H	D	F	G	L	P	O	E	P	G	N	O	F	O	K	A	I	S	V	L	H	E	M	83				
		:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Db	1	C	D	L	P	O	H	S	I	G	N	R	T	I	M	A	O	M	R	I	S	P	F	C	L	D	R	H	D	F	G	L	P	O	E	P	E	F	G	N	O	F	O	A	I	S	V	L	H	E	M	60				
Qy	84	I	O	T	F	L	P	S	T	E	R	S	A	M	E	S	I	L	E	K	F	S	T	E	L	Y	O	O	L	N	L	E	C	A	V	I	O	E	V	G	M	E	T	P	L	M	N	E	S	I	L	A	V	143		
		:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Db	61	I	O	T	F	L	P	S	T	K	O	S	A	T	W	E	T	L	L	D	K	E	T	E	L	Y	O	O	L	N	D	L	E	C	A	V	I	O	E	V	G	M	E	T	P	L	M	N	V	S	I	L	T	V	120	
Qy	144	R	K	F	O	R	I	T	L	T	L	T	E	K	K	S	P	C	A	M	E	V	N	A	E	L	M	R	S	L	S	P	T	N	L	O	K	T	L	R	K	D	189													
		:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Db	121	R	K	F	O	R	I	T	L	T	L	T	E	K	K	S	P	C	A	M	E	V	N	A	E	L	M	R	S	L	S	P	A	N	L	O	E	L	R	K	E	166														

RESULT 12  
US-11-132-722-54

Sequence 54, Application US/1113722  
Publication No. US20050266465A1  
GENERAL INFORMATION:  
APPLICANT: Patten, Phillip A., et al.  
TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND  
TITLE OF INVENTION: CONJUGATES  
FILE REFERENCE: 0280.310US  
CURRENT APPLICATION NUMBER: US/11/332.722  
CURRENT FILING DATE: 2005-05-18  
PRIOR APPLICATION NUMBER: US 60/572,504  
PRIOR FILING DATE: 2004-05-19

NUMBER OF SEQ ID NOS: 90  
 SOFTWARE: FastSeq for Windows Version 4.0  
 SEQ ID NO 54  
 LENGTH: 166  
 TYPE: PRT  
 ORGANISM: homo sapiens  
 US-11-132-722-54

Query Match 76.6%; Score 736; DB 7; Length 166;  
 Best Local Similarity 84.9%; Pred. No. 1e-64;  
 Matches 141; Conservative 13; Mismatches 12; Indels 0; Gaps 0;

QY 24 CDLPQTHSLGNRRALILIAQMGRISSPSCDKDRHDFGLPOEPPDGNQFOKTOAISVLHEM 83  
 DB 1 CNISSQTHSLNRRRTLMIAQMRRISSPSCDKDRHDFGFPEEPDGNQFOKTOAISVLHEM 60  
 QY 84 IQOTFNLFTSDSSAAMEQSLLEKFTSTELYQOQNNLEACVIOEYGMETPLMNEDSLILAV 143  
 DB 61 IQOTFNLFTSTKSSAAMDTELEKFTYELFQOQNNLEACVIOEYGVETPLMNEDSLILAV 120  
 QY 144 RKYFORITLYLTKKYSPCAMEVVRABIMRSLSFSTNLQKILRRKD 189  
 DB 121 RKYFORITLYLTKKYSPCAMEVVRABIMRSLSFSTNLQKILRRKD 166

RESULT 13  
 US-11-132-722-44  
 Sequence 44, Application US/11132722  
 Publication No. US20050266465A1  
 GENERAL INFORMATION:  
 APPLICANT: Patten, Phillip A., et al.  
 TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND  
 FILE REFERENCE: 0280.310US  
 CURRENT APPLICATION NUMBER: US/11/132,722  
 CURRENT FILING DATE: 2005-05-18  
 PRIOR APPLICATION NUMBER: US 60/572,504  
 PRIOR FILING DATE: 2004-05-19  
 NUMBER OF SEQ ID NOS: 90  
 SOFTWARE: FastSeq for Windows Version 4.0  
 SEQ ID NO 44  
 LENGTH: 166  
 TYPE: PRT  
 ORGANISM: Artificial Sequence  
 FEATURE:  
 OTHER INFORMATION: Synthetic Construct 25Epi29  
 US-11-132-722-44

Query Match 76.0%; Score 730; DB 7; Length 166;  
 Best Local Similarity 83.7%; Pred. No. 3.8e-64;  
 Matches 139; Conservative 14; Mismatches 13; Indels 0; Gaps 0;

QY 24 CDLPQTHSLGNRRALILIAQMGRISSPSCDKDRHDFGLPOEPPDGNQFOKTOAISVLHEM 83  
 DB 1 CDLPQTHSLNRRRTLMIAQMRRISSPSCDKDRHDFGFPEEPDGNQFOKTOAISVLHEM 60  
 QY 84 IQOTFNLFTSDSSAAMEQSLLEKFTSTELYQOQNNLEACVIOEYGMETPLMNEDSLILAV 143  
 DB 61 IQOTFNLFTSTKSSAAMDTELEKFTYELFQOQNNLEACVIOEYGVETPLMNEDSLILAV 120  
 QY 144 RKYFORITLYLTKKYSPCAMEVVRABIMRSLSFSTNLQKILRRKD 189  
 DB 121 RKYFORITLYLTKKYSPCAMEVVRABIMRSLSFSTNLQKILRRKD 166

RESULT 14  
 US-11-132-722-55  
 Sequence 55, Application US/11132722  
 Publication No. US20050266465A1  
 GENERAL INFORMATION:  
 APPLICANT: Patten, Phillip A., et al.  
 TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND  
 CONJUGATES

FILE REFERENCE: 0280.310US  
 CURRENT APPLICATION NUMBER: US/11/132,722  
 CURRENT FILING DATE: 2005-05-18  
 PRIOR APPLICATION NUMBER: US 60/572,504  
 PRIOR FILING DATE: 2004-05-19  
 NUMBER OF SEQ ID NOS: 90  
 SOFTWARE: FastSeq for Windows Version 4.0  
 SEQ ID NO 55  
 LENGTH: 166  
 TYPE: PRT  
 ORGANISM: homo sapiens  
 US-11-132-722-55

Query Match 76.0%; Score 730; DB 7; Length 166;  
 Best Local Similarity 85.5%; Pred. No. 3.8e-64;  
 Matches 142; Conservative 9; Mismatches 15; Indels 0; Gaps 0;

QY 24 CDLPQTHSLGNRRALILIAQMGRISSPSCDKDRHDFGLPOEPPDGNQFOKTOAISVLHEM 83  
 DB 1 CDLPQTHSLNRRRTLMIAQMRRISSPSCDKDRHDFGFPEEPDGNQFOKTOAISVLHEM 60  
 QY 84 IQOTFNLFTSDSSAAMEQSLLEKFTSTELYQOQNNLEACVIOEYGMETPLMNEDSLILAV 143  
 DB 61 IQOTFNLFTSTKSSAAMDTELEKFTYELFQOQNNLEACVIOEYGVETPLMNEDSLILAV 120  
 QY 144 RKYFORITLYLTKKYSPCAMEVVRABIMRSLSFSTNLQKILRRKD 189  
 DB 121 RKYFORITLYLTKKYSPCAMEVVRABIMRSLSFSTNLQKILRRKD 166

RESULT 15  
 US-11-132-722-36  
 Sequence 36, Application US/11132722  
 Publication No. US20050266465A1  
 GENERAL INFORMATION:  
 APPLICANT: Patten, Phillip A., et al.  
 TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND  
 FILE REFERENCE: 0280.310US  
 CURRENT APPLICATION NUMBER: US/11/132,722  
 CURRENT FILING DATE: 2005-05-18  
 PRIOR APPLICATION NUMBER: US 60/572,504  
 PRIOR FILING DATE: 2004-05-19  
 NUMBER OF SEQ ID NOS: 90  
 SOFTWARE: FastSeq for Windows Version 4.0  
 SEQ ID NO 36  
 LENGTH: 166  
 TYPE: PRT  
 ORGANISM: Artificial Sequence  
 FEATURE:  
 OTHER INFORMATION: Synthetic Construct 25Epi08  
 US-11-132-722-36

Query Match 75.5%; Score 726; DB 7; Length 166;  
 Best Local Similarity 83.1%; Pred. No. 9.3e-64;  
 Matches 138; Conservative 15; Mismatches 13; Indels 0; Gaps 0;

QY 24 CDLPQTHSLGNRRALILIAQMGRISSPSCDKDRHDFGLPOEPPDGNQFOKTOAISVLHEM 83  
 DB 1 CDLPQTHSLNRRRTLMIAQMRRISSPSCDKDRHDFGFPEEPDGNQFOKTOAISVLHEM 60  
 QY 84 IQOTFNLFTSDSSAAMEQSLLEKFTSTELYQOQNNLEACVIOEYGMETPLMNEDSLILAV 143  
 DB 61 IQOTFNLFTSTKSSAAMDTELEKFTYELFQOQNNLEACVIOEYGVETPLMNEDSLILAV 120  
 QY 144 RKYFORITLYLTKKYSPCAMEVVRABIMRSLSFSTNLQKILRRKD 189  
 DB 121 RKYFORITLYLTKKYSPCAMEVVRABIMRSLSFSTNLQKILRRKD 166

Search completed: December 15, 2005, 13:40:05  
 Job time : 12 secs

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GenCore version 5.1.6  
Copyright (c) 1993 - 2005 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: December 15, 2005, 13:25:59 ; Search time 38 Seconds  
(without alignments)  
478.552 Million cell updates/sec

Title: US-10-691-653-2

Perfect score: 961  
Sequence: 1 MALSFSLMAVLTLSKSLC.....EIMRSLSFSTNLTOKILRRKD 189

Scoring table: BL0SUM62  
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0  
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : PIR 80.\*  
1: p1r1.\*  
2: p1r2.\*  
3: p1r3.\*  
4: p1r4.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	951	99.0	189	1	interferon alpha-1
2	949	98.8	189	2	interferon precurs
3	919	95.6	189	2	interferon alpha-M
4	917	95.4	189	1	interferon alpha-I
5	917	95.4	189	1	interferon alpha-I
6	898	93.4	176	2	interferon alpha-5
7	892	92.8	189	2	interferon alpha-J
8	882	91.8	189	1	interferon alpha-7
9	872	90.7	189	2	interferon alpha-F
10	870	90.5	189	1	interferon alpha-I
11	837	87.1	181	2	interferon alpha-2
12	837	87.1	189	1	interferon alpha-I
13	826	86.0	189	2	interferon alpha-I
14	821	85.4	189	1	interferon alpha-5
15	813	84.6	189	1	interferon alpha-I
16	785	81.7	167	2	interferon alpha-J
17	769	80.0	189	1	interferon alpha-I
18	768	79.9	189	1	interferon alpha-I
19	767.5	79.9	188	1	interferon alpha-2
20	763	79.4	167	2	interferon alpha-F
21	756	78.7	189	1	interferon alpha-I
22	734	76.4	167	2	interferon alpha-G
23	734	76.4	189	1	interferon alpha-4
24	721	75.0	184	1	interferon alpha-I
25	717	74.6	184	1	interferon alpha-I
26	715	74.4	184	1	interferon alpha-I
27	709	73.8	184	1	interferon alpha-I
28	694.5	72.3	165	2	alpha 2 interferon
29	673	70.0	162	2	interferon alpha-B

30	644	67.0	189	2	S23709	interferon alpha-1
31	608	63.3	189	1	IVBO11	interferon alpha-I
32	603	62.7	189	1	IVBO1A	interferon alpha-I
33	603	62.7	189	1	IVBO1B	interferon alpha-I
34	603	62.7	189	1	IVBO1D	interferon alpha-I
35	596	62.0	189	1	IVMSA5	interferon alpha-I
36	593	61.7	189	1	IVBO1C	interferon alpha-I
37	593	61.7	190	2	I49774	alpha-interferon -
38	592	61.6	189	1	IVMSA1	interferon alpha-I
39	585	60.9	190	2	A24401	interferon alpha-I
40	572	59.5	192	1	IVRTA1	interferon alpha-1
41	569	59.2	190	1	IVMSA2	interferon alpha-2
42	569	59.2	190	2	I49775	interferon alpha-B
43	568	59.1	190	2	I49772	interferon alpha-7
44	556	57.9	190	2	UH0468	interferon alpha-1
45	545	56.7	189	1	IVMSA6	interferon alpha-I

## ALIGNMENTS

RESULT 1  
interferon alpha-17 precursor - human  
N:Alternate names: interferon alpha-9; interferon alpha-1'  
C:Species: Homo sapiens (man)  
C>Date: 01-Sep-1981 #sequence revision 01-Sep-1981 #text change 09-Jul-2004  
C/Accession: A01835; A22255; C42753  
R:Lawn, R.M.; Adelman, J.; Dull, T.J.; Gross, M.; Goeddel, D.; Ullrich, A.  
Science 212, 1159-1162, 1981  
A>Title: DNA sequence of two closely linked human leukocyte interferon genes.  
A/Reference number: A94255; MUID:81201124; PMID:6165082  
A/Accession: A01835  
A/Molecule type: DNA  
A/Residues: 1-189 <LAW>  
A/Cross-references: UNIPROT:P01571; UNIPARC:UPI0000141F4B; GB:J00216; GB:V00532; NID:G320  
R:Mizoguchi, J.; Pitba, P.M.; Raj, N.B.K.  
DNA 4, 221-232, 1985  
A>Title: Efficient expression in Escherichia coli of two species of human interferon- $\alpha$   
A/Reference number: A22255; MUID:85229953; PMID:3891272  
A/Accession: A22255  
A/Molecule type: mRNA  
A/Residues: 1-56, 'H', 58-189 <MTZ>  
A/Cross-references: UNIPARC:UPI0000052A9; GB:M1026; NID:G184612; PIDN:AA52725.1; PID:  
R:Zoon, K.C.; Miller, D.; Bekisz, J.; zur Nedden, D.; Enterline, J.C.; Nguyen, N.Y.; Hu,  
J. Biol. Chem. 267, 15210-15216, 1992  
A>Title: Purification and characterization of multiple components of human lymphoblastoid  
A/Reference number: A42753; MUID:92340576; PMID:1634550  
A/Accession: C42753  
A/Molecule type: protein  
A/Residues: 'X', 25-50, 'XX', 53-56 <ZOO>  
A/Cross-references: UNIPARC:UPI000017365F  
C:Genetics:  
A:Gene: GDB:IFNA17  
A/Cross-references: GDB:136358; OMIM:147583  
A/Map position: 9p22-9p22  
C:Superfamily: interferon alpha  
C/Keywords: leukocyte  
F:1-23/Domain: signal sequence #status predicted <SIG>  
F:24-189/Product: interferon alpha-17 #status predicted <MAT>  
F:24-122,52-162/Disulfide bonds: #status predicted

Query Match 99.0%; Score 951; DB 1; Length 189;  
Best Local Similarity 99.5%; Pred. No. 6.5e-77;  
Matches 188; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MALSFSLMAVLTLSKSLCIGCDLPQTHSLGRRRLILIAQGRISPSFCLDRDPFG 60  
DB 1 MALSFSLMAVLTLSKSLCIGCDLPQTHSLGRRRLILIAQGRISPSFCLDRDPFG 60  
QY LPOSEPDGNOFOKQQAISVLEHMIQQTENLFSTEDSSAAEQSILKEFSTELYOOLNMLE 120  
DB LPOSEPDGNOFOKQQAISVLEHMIQQTENLFSTEDSSAAEQSILKEFSTELYOOLNMLE 120

QY 121 ACVIOEVGMERTPLNNEDSIIAIVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSSTN 180  
DB 121 ACVIOEVGMERTPLNNEDSIIAIVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSSTN 180  
QY 181 LQKILRRKD 189  
DB 181 LQKILRRKD 189

## RESULT 2

151970  
interferon precursor - human  
C:Species: Homo sapiens (man)  
C:Date: 02-Jul-1996 #sequence\_revision 02-Jul-1996 #text\_change 16-Jul-1999  
C:Accession: I51970  
R:Savelliev, V.I.; Zlochevsky, M.L.; Sorokin, A.V.; Naroditskaya, V.A.; Bolotin, A.P.; De  
Antibiot. Med. Biotechnol. 31, 592-596, 1986  
A:Title: [Cloning and the determination of the nucleotide sequences in 2 genes of human  
A:Reference number: I51970; MUID:87024453; PMID:3767336  
A:Accession: I51970  
A:Status: preliminary; translated from GB/EMBL/DBJ  
A:Molecule type: mRNA  
A:Residues: 1-189 <RES>  
A:Cross-references: UNIPARC:UPI000016AB15; GB:M38289; NID:G186407; PIDN:AAA59165.1; PID:  
C:Genetics:  
A:Gene: IFNA  
C:Superfamily: interferon alpha

Query Match 98.8%; Score 949; DB 2; Length 189;  
Best Local Similarity 98.9%; Pred. No. 9.8e-77;  
Matches 187; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 MALSFSLMAVIVLSYKSGICGLDPQTHSLGNRRALILLAQMGRIISPFSLKDRHDFG 60  
DB 1 MALSFSLMAVIVLSYKSGICGLDPQTHSLGNRRALILLAQMGRIISPFSLKDRHDFG 60  
QY 61 LPQEFPGDQFOKTOAISVLHEMIQOTFNLFTSDSSAAWQSILKEKSTELYYOQLNDLE 120  
DB 61 LPQEFPGDQFOKTOAISVLHEMIQOTFNLFTSDSSAAWQSILKEKSTELYYOQLNDLE 120  
QY 121 ACVIOEVGMERTPLNNEDSIIAIVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSSTN 180  
DB 121 ACVIOEVGMERTPLNNEDSIIAIVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSSTN 180  
QY 181 LQKILRRKD 189  
DB 181 LQKILRRKD 189

## RESULT 3

152347  
interferon alpha-M1 precursor - human  
C:Species: Homo sapiens (man)  
C:Date: 02-Jul-1996 #sequence\_revision 02-Jul-1996 #text\_change 09-Jul-2004  
C:Accession: I52347  
R:Linane, A.W.; Beilharz, M.W.; McMullen, G.L.; Macreadie, I.G.; Murphy, M.; Nisbet, I.  
Biochem. Int. 8, 725-732, 1994  
A:Title: Nucleotide sequence and expression in E. coli of a human interferon-alpha gene  
A:Reference number: I52347; MUID:84307815; PMID:6089830  
A:Accession: I52347  
A:Status: preliminary; translated from GB/EMBL/DBJ  
A:Molecule type: mRNA  
A:Residues: 1-189 <RES>  
A:Cross-references: UNIPROT:P05014; UNIPARC:UPI000002BA77; GB:M27318; NID:G184617; PIDN:  
C:Genetics:  
A:Gene: IFNA  
C:Superfamily: interferon alpha

Query Match 95.6%; Score 919; DB 2; Length 189;  
Best Local Similarity 95.8%; Pred. No. 4.4e-74;  
Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 MALSFSLMAVIVLSYKSGICGLDPQTHSLGNRRALILLAQMGRIISPFSLKDRHDFG 60  
DB 1 MALSFSLMAVIVLSYKSGICGLDPQTHSLGNRRALILLAQMGRIISPFSLKDRHDFG 60  
QY 61 LPQEFPGDQFOKTOAISVLHEMIQOTFNLFTSDSSAAWQSILKEKSTELYYOQLNDLE 120  
DB 61 LPQEFPGDQFOKTOAISVLHEMIQOTFNLFTSDSSAAWQSILKEKSTELYYOQLNDLE 120  
QY 121 ACVIOEVGMERTPLNNEDSIIAIVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSSTN 180  
DB 121 ACVIOEVGMERTPLNNEDSIIAIVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSSTN 180  
QY 181 LQKILRRKD 189  
DB 181 LQKILRRKD 189

## RESULT 4

1VHU4B  
interferon alpha-I-4b precursor - human  
N:Alternate names: HuIFN-alpha-I-4b; type I interferon  
C:Species: Homo sapiens (man)  
C:Date: 28-Dec-1987 #sequence\_revision 28-Dec-1987 #text\_change 09-Jul-2004  
C:Accession: E23753  
R:Henco, K.; Brosius, J.; Fujisawa, A.; Fujisawa, J.I.; Haynes, J.R.; Hochstadt, J.; Kov:  
J. Mol. Biol. 185, 227-260, 1985  
A:Title: Structural relationship of human interferon alpha genes and pseudogenes.  
A:Reference number: A92916; MUID:86037205; PMID:4057246  
A:Accession: E23753  
A:Molecule type: DNA  
A:Residues: 1-189 <HEN>  
A:Cross-references: UNIPROT:P05014; UNIPARC:UPI0000047761; GB:X02955; NID:G32656; PIDN:C:  
C:Genetics:  
A:Gene: GDB:IFN1@  
A:Cross-references: GDB:119328; OMIM:147660  
A:Map position: 9p22-9p22  
C:Superfamily: interferon alpha  
C:Keywords: antiviral  
F:1-23/Domain: signal sequence #status predicted <SIG>  
F:24-189/Product: interferon alpha-I-4b #status predicted <MAT>  
F:24-122,52-162/Disulfide bonds: #status predicted

Query Match 95.4%; Score 917; DB 1; Length 189;  
Best Local Similarity 95.8%; Pred. No. 6.7e-74;  
Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 MALSFSLMAVIVLSYKSGICGLDPQTHSLGNRRALILLAQMGRIISPFSLKDRHDFG 60  
DB 1 MALSFSLMAVIVLSYKSGICGLDPQTHSLGNRRALILLAQMGRIISPFSLKDRHDFG 60  
QY 61 LPQEFPGDQFOKTOAISVLHEMIQOTFNLFTSDSSAAWQSILKEKSTELYYOQLNDLE 120  
DB 61 LPQEFPGDQFOKTOAISVLHEMIQOTFNLFTSDSSAAWQSILKEKSTELYYOQLNDLE 120  
QY 121 ACVIOEVGMERTPLNNEDSIIAIVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSSTN 180  
DB 121 ACVIOEVGMERTPLNNEDSIIAIVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSSTN 180  
QY 181 LQKILRRKD 189  
DB 181 LQKILRRKD 189

## RESULT 5

1VHU4S  
interferon alpha-5 precursor - human  
C:Species: Homo sapiens (man)  
C:Date: 01-Sep-1981 #sequence\_revision 01-Sep-1981 #text\_change 09-Jul-2004  
C:Accession: A60937; A01830  
R:Bartholomew, C.; Windass, J.D.  
J. Interferon Res. 9, 407-417, 1989  
A:Title: Identification of a functional allele of a human interferon-alpha gene previous  
A:Reference number: A60937; MUID:89328015; PMID:2526839

A:Accession: A60937  
 A:Molecule type: DNA  
 A:Residues: 1-189 <BAR>  
 A:Cross-references: UNIPROT:P01566; UNIPARC:UPI0000047765  
 A>Note: this genomic sequence, SMTH11.1A, encodes a functional allele for alpha interferon and is a pseudogene  
 R:Goeddel, D.V.; Leung, D.W.; Dull, T.J.; Gross, M.; Lawn, R.M.; McCandliss, R.; Seeburg Nature 290, 20-26, 1981  
 A:Title: The structure of eight distinct cloned human leukocyte interferon cDNAs.  
 A:Reference number: A93249; MUID:81148795; PMID:6153083  
 A:Accession: A01830  
 A:Molecule type: mRNA  
 A:Residues: 1-189 <GGE>  
 A:Cross-references: UNIPARC:UPI0000047765; GB:V00551; GB:U00209; NID:932748; PIDN:CAA238  
 A>Note: eight classes of interferon alpha clones were identified, this sequence is deriv C:Genetics:  
 A:Gene: GDB:IFNA5  
 A:Cross-references: GDB:136362; OMIM:147565  
 A:Map position: 9p22-9p22  
 C:Superfamily: interferon alpha  
 C:Keywords: leukocyte  
 F:1-23/Domain: signal sequence #status predicted <SIG>  
 F:24-189/Product: interferon alpha-5 #status predicted <MAT>  
 F:24-122,52-162/Disulfide bonds: #status predicted

Query Match 95.4%; Score 917; DB 1; Length 189;  
 Best Local Similarity 95.2%; Pred. No. 6.7e-74;  
 Matches 180; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 MALSFSLMAVLYSYKSLGCDLPQTHSLGNRRALLILAQMGRIISFSCCKDRHDFG 60  
 DB 1 MALSFSLMAVLYSYKSLGCDLPQTHSLGNRRALLILAQMGRIISFSCCKDRHDFR 60  
 QY 61 LPOEFDGNGFOKTOAISVLHEMIQOTFNLFTEDSSAAEQSLLEKFSLEYQQLNMLE 120  
 DB 61 LPOEFDGNGFOKTOAISVLHEMIQOTFNLFTEDSSAAEQSLLEKFSLEYQQLNMLE 120  
 QY 121 ACYIOEYGMETPLMNEDSLAVKRYFORITLYLTKKYSPCAMEVVRARIMRSLSFSTN 180  
 DB 121 ACYIOEYGMETPLMNEDSLAVKRYFORITLYLTKKYSPCAMEVVRARIMRSLSFSTN 180  
 QY 181 LOKILRRKD 189  
 DB 181 LOKILRRKD 189

## RESULT 6

156314  
 Interferon-alpha - human (fragment)  
 C:Species: Homo sapiens (man)  
 C>Date: 02-Jul-1996 #sequence\_revision 02-Jul-1996 #text\_change 09-Jul-2004  
 C:Accession: 156314  
 R:Lund, B.; von Gabain, A.; Edlund, T.; Ny, T.; Lundgren, E.  
 J:Interferon Res. 5, 229-238, 1985  
 A:Title: Differential expression of interferon genes in a substrain of Namalwa cells.  
 A:Reference number: 156314; MUID:85235859; PMID:4008999  
 A:Accession: 156314  
 A:Status: preliminary; translated from GB/EMBL/DBJ  
 A:Molecule type: mRNA  
 A:Residues: 1-176 <RSS>  
 A:Cross-references: UNIPROT:P01571; UNIPARC:UPI000002C74E; GB:M71246; NID:9184572; PIDN: C:Genetics:  
 A:Gene: IFNA  
 C:Superfamily: interferon alpha

Query Match 93.4%; Score 898; DB 2; Length 176;  
 Best Local Similarity 99.4%; Pred. No. 2.9e-72;  
 Matches 175; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
 QY 14 LSYKSLGCDLPQTHSLGNRRALLILAQMGRIISFSCCKDRHDFGLPOEFDGNGFOK 73  
 DB 1 LSYKSLGCDLPQTHSLGNRRALLILAQMGRIISFSCCKDRHDFGLPOEFDGNGFOK 60

QY 74 TQAIISVLHEMIQOTFNLFTEDSSAAEQSLLEKFSLEYQQLNMLEACYIOEYGMETPL 133  
 DB 61 TQAIISVLHEMIQOTFNLFTEDSSAAEQSLLEKFSLEYQQLNMLEACYIOEYGMETPL 120  
 QY 134 LMNEDSILAVKRYFORITLYLTKKYSPCAMEVVRARIMRSLSFSTNLOKILRRKD 189  
 DB 121 LMNEDSILAVKRYFORITLYLTKKYSPCAMEVVRARIMRSLSFSTNLOKILRRKD 176

## RESULT 7

153102  
 Interferon-alpha-J1 - human  
 C:Species: Homo sapiens (man)  
 C>Date: 02-Jul-1996 #sequence\_revision 02-Jul-1996 #text\_change 09-Jul-2004  
 C:Accession: 153102  
 R:Cohen, S.; Velen, B.; Grosfeld, H.; Shalita, Z.; Lettner, M.; Shaffer, A.  
 Dev. Biol. Stand. 60, 111-122, 1985  
 A:Title: Cloning, expression and biological activity of a new variant of human interferon  
 A:Reference number: 153102; MUID:86005847; PMID:2395168  
 A:Accession: 153102  
 A:Status: preliminary; translated from GB/EMBL/DBJ  
 A:Molecule type: mRNA  
 A:Residues: 1-189 <RBS>  
 A:Cross-references: UNIPROT:P01567; UNIPARC:UPI0000161BA7; GB:M34913; NID:9184614; PIDN: C:Superfamily: interferon alpha

Query Match 92.8%; Score 892; DB 2; Length 189;  
 Best Local Similarity 93.1%; Pred. No. 1.1e-71;  
 Matches 176; Conservative 6; Mismatches 7; Indels 0; Gaps 0;

QY 1 MALSFSLMAVLYSYKSLGCDLPQTHSLGNRRALLILAQMGRIISFSCCKDRHDFG 60  
 DB 1 MALSFSLMAVLYSYKSLGCDLPQTHSLGNRRALLILAQMGRIISFSCCKDRHDFR 60  
 QY 61 LPOEFDGNGFOKTOAISVLHEMIQOTFNLFTEDSSAAEQSLLEKFSLEYQQLNMLE 120  
 DB 61 LPOEFDGNGFOKTOAISVLHEMIQOTFNLFTEDSSAAEQSLLEKFSLEYQQLNMLE 120  
 QY 121 ACYIOEYGMETPLMNEDSLAVKRYFORITLYLTKKYSPCAMEVVRARIMRSLSFSTN 180  
 DB 121 ACYIOEYGMETPLMNEDSLAVKRYFORITLYLTKKYSPCAMEVVRARIMRSLSFSTN 180  
 QY 181 LOKILRRKD 189  
 DB 181 LOKILRRKD 189

## RESULT 8

156314  
 Interferon alpha-7 precursor - human  
 N:Alternate names: Interferon alpha-7; leIF 7  
 C:Species: Homo sapiens (man)  
 C>Date: 18-Aug-1982 #sequence\_revision 18-Aug-1982 #text\_change 09-Jul-2004  
 C:Accession: A01831; S43717  
 R:Ulrich, A.; Gray, A.; Goeddel, D.V.; Dull, T.J.  
 J:Mol. Biol. 156, 467-486, 1982  
 A:Title: Nucleotide sequence of a portion of human chromosome 9 containing a leukocyte ir A:Reference number: A01831; MUID:93010248; PMID:6181262  
 A:Accession: A01831  
 A:Molecule type: DNA  
 A:Residues: 1-189 <ULL>  
 A:Cross-references: UNIPROT:P01567; UNIPARC:UPI000004775E; GB:V00531; NID:932631; PIDN: C: A>Note: this interferon is derived from a gene referred to as J by the authors  
 R:Henco, K.; Brosius, J.; Fujisawa, A.; Fujisawa, O.I.; Haynes, J.R.; Hochstadt, J.; Kovacs, J. Mol. Biol. 185, 227-260, 1985  
 A:Title: Structural relationship of human interferon alpha genes and pseudogenes.  
 A:Reference number: A92916; MUID:86037205; PMID:4057246  
 A:Accession: S43717

A:Molecule type: DNA  
 A:Residues: 1-189 <HEN>  
 A:Cross-references: UNIPARC:UPI000004775E; EMBL:X02960; NID:932665; PIDN:CAA26706.1; PID: C:Genetics:  
 A:Gene: GDB:IFNA7

A:Cross-references: GDB:136364; OMIM:147567  
A:Map position: 9p22-9p22  
C:Superfamily: interferon alpha  
C:Keywords: antiviral; cytokine; leukocyte  
F:1-23/Domain: signal sequence #status predicted <SIG>  
F:24-189/Product: interferon alpha-7 #status predicted <Mat>  
F:24-122,52-162/Distulfide bonds: #status predicted

Query Match 91.8%; Score 882; DB 1; Length 189;  
Best Local Similarity 92.1%; Pred. No. 8,3e-71;  
Matches 174; Conservative 6; Mismatches 9; Indels 0; Gaps 0;

QY 1 MALSFLMAMVILVSYKISGLGCDLPQTHSLGNRRALLLAQWGRISPSFCLKDRHDFG 60  
DB 1 MARSFLMAMVILVSYKISGLGCDLPQTHSLGNRRALLLAQWGRISPSFCLKDRHDFR 60  
QY 61 LPQEFPGNPOKQKQALSVLHEMIQOTFNLFTSTEDSSAAWQSLEKSTELVQQLNMLE 120  
DB 61 PPEEFDPHQFOKQKQALSVLHEMIQOTFNLFTSTEDSSAAWQSLEKSTELVQQLNMLE 120  
QY 121 ACVIOEVMGEETPLANNEDSILAVRKYFORITLYLTKKYSPCAMEVVAEIMRSLSFSTN 180  
DB 121 ACVIOEVMGEETPLANNEDSILAVRKYFORITLYLTKKYSPCAMEVVAEIMRSLSFSTN 180  
QY 181 LQKILRRKD 189  
DB 181 LKGLRRKD 189

RESULT 9  
184464  
Interferon-alpha-F - human  
C:Species: Homo sapiens (man)  
C:Date: 02-Aug-1996 #sequence\_revision 02-Aug-1996 #text\_change 09-Jul-2004  
C:Accession: 184464; 137583  
R:Gren, E.Y.; Berzin, V.M.; Tsimanis, A.Y.; Apsalov, U.R.; Vishnevskii, Y.I.; Yansone, I.  
A:; Lozha, V.P.; Kavran, V.M.; Efimov, V.A.; Sverdlon, E.D.  
Dokl. Biochem. 269, 91-95, 1983  
A:Title: A new type of leukocytic interferon.  
A:Reference number: 137583  
A:Accession: 184464  
A:Status: preliminary; translated from GB/EMBL/DBJ  
A:Molecule type: mRNA  
A:Residues: 1-189 <RES>  
A:Cross-references: UNIPROT:P01568; UNIPARC:UPI000002C35A; GB:M12350; NID:G184598; PIDN:  
A:Status: preliminary; translated from GB/EMBL/DBJ  
A:Molecule type: mRNA  
A:Residues: 1-189 <RES>  
A:Cross-references: UNIPARC:UPI000002C35A; EMBL:X00145; NID:G32724; PIDN:CAA24980.1; PID  
C:Genetics:  
A:Gene: IFNA

C:Superfamily: interferon alpha

Query Match 90.7%; Score 872; DB 2; Length 189;  
Best Local Similarity 91.0%; Pred. No. 6,4e-70;  
Matches 172; Conservative 6; Mismatches 11; Indels 0; Gaps 0;

QY 1 MALSFLMAMVILVSYKISGLGCDLPQTHSLGNRRALLLAQWGRISPSFCLKDRHDFG 60  
DB 1 MALSFLMAMVILVSYKISGLGCDLPQTHSLGNRRALLLAQWGRISPSFCLKDRHDFG 60  
QY 61 LPQEFPGNPOKQKQALSVLHEMIQOTFNLFTSTEDSSAAWQSLEKSTELVQQLNMLE 120  
DB 61 PPEEFDPHQFOKQKQALSVLHEMIQOTFNLFTSTEDSSAAWQSLEKSTELVQQLNMLE 120  
QY 121 ACVIOEVMGEETPLANNEDSILAVRKYFORITLYLTKKYSPCAMEVVAEIMRSLSFSTN 180  
DB 121 ACVIOEVMGEETPLANNEDSILAVRKYFORITLYLTKKYSPCAMEVVAEIMRSLSFSKI 180  
QY 181 LQKILRRKD 189  
DB 181 FOERLRKE 189

RESULT 10

1YHUF

Interferon alpha-I-F precursor - human  
N:Alternate names: HuIFN-alpha-I-F; IeIF F; type I interferon  
C:Species: Homo sapiens (man)  
C:Date: 01-Sep-1981 #sequence\_revision 01-Sep-1981 #text\_change 09-Jul-2004  
C:Accession: A01832  
R:Goodall, D.V.; Leung, D.W.; Dull, T.J.; Gross, M.; Lawn, R.M.; McCandliss, R.; Seeburg

Nature 290, 20-26, 1981  
A:Title: The structure of eight distinct cloned human leukocyte interferon cDNAs.  
A:Reference number: A93249; MUID:81148795; PMID:6163083  
A:Accession: A01832  
A:Molecule type: mRNA  
A:Residues: 1-189 <GOE>

A:Cross-references: UNIPROT:P01568; UNIPARC:UPI0000047762; GB:V00540; GB:U00212; NID:G32  
A:Note: eight classes of interferon alpha clones were identified; this sequence is deriv  
C:Genetics:  
A:Gene: GDB:IFNA1@

A:Cross-references: GDB:119328; OMIM:147660

A:Map position: 9p22-9p22  
C:Superfamily: interferon alpha  
C:Keywords: antiviral  
F:1-23/Domain: signal sequence #status predicted <SIG>  
F:24-189/Product: interferon alpha-I-F #status predicted <Mat>  
F:24-122,52-162/Distulfide bonds: #status predicted

Query Match 90.5%; Score 870; DB 1; Length 189;  
Best Local Similarity 90.5%; Pred. No. 9,6e-70;  
Matches 171; Conservative 7; Mismatches 11; Indels 0; Gaps 0;

QY 1 MALSFLMAMVILVSYKISGLGCDLPQTHSLGNRRALLLAQWGRISPSFCLKDRHDFG 60  
DB 1 MALSFLMAMVILVSYKISGLGCDLPQTHSLGNRRALLLAQWGRISPSFCLKDRHDFG 60  
QY 61 LPQEFPGNPOKQKQALSVLHEMIQOTFNLFTSTEDSSAAWQSLEKSTELVQQLNMLE 120  
DB 61 PPEEFDPHQFOKQKQALSVLHEMIQOTFNLFTSTEDSSAAWQSLEKSTELVQQLNMLE 120  
QY 121 ACVIOEVMGEETPLANNEDSILAVRKYFORITLYLTKKYSPCAMEVVAEIMRSLSFSTN 180  
DB 121 ACVIOEVMGEETPLANNEDSILAVRKYFORITLYLTKKYSPCAMEVVAEIMRSLSFSKI 180  
QY 181 LQKILRRKD 189  
DB 181 FOERLRKE 189

RESULT 11

Interferon alpha 21 - human  
C:Species: Homo sapiens (man)  
C:Date: 02-Jul-1996 #sequence\_revision 02-Jul-1996 #text\_change 09-Jul-2004  
C:Accession: 156313

R:Gren, E.; Berzin, V.M.; Jansone, I.; Tsimanis, A.; Vishnevsky, Y.; Apsalov, U.  
J. Interferon Res. 4, 609-617, 1984  
A:Title: Novel human leukocyte interferon subtype and structural comparison of alpha inte  
A:Reference number: 156313; MUID:85056523; PMID:6548765  
A:Accession: 156313  
A:Status: preliminary; translated from GB/EMBL/DBJ  
A:Molecule type: mRNA  
A:Residues: 1-181 <RES>

A:Cross-references: UNIPROT:Q14608; UNIPARC:UPI00000677D8; GB:M28586; NID:G184636; PIDN:  
C:Genetics:  
A:Gene: GDB:IFNA21

A:Cross-references: GDB:136360; OMIM:147584

A:Map position: 9p22-9p22

C:Superfamily: interferon alpha  
Query Match 87.1%; Score 837; DB 2; Length 181;  
Best Local Similarity 90.6%; Pred. No. 7,5e-67;  
Matches 164; Conservative 6; Mismatches 11; Indels 0; Gaps 0;



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Qy 9 MAUVLVSYKSIICSGCDLPQTHSLGNRRALLILAAQMGRIISPSCLKDRHDFGLPOEERD 68
Db 1 MAUVLVSYKSIICSGCDLPQTHSLGNRRALLILAAQMGRIISPSCLKDRHDFGLPOEERD 60
Qy 69 NQFOKQAIISVLHEMIQOTFNLFTEDSSAAWESILKEFSTELVYQQLNLEACVIOEVG 128
Db 61 NQFOKQAIISVLHEMIQOTFNLFTEDSSAAWESILKEFSTELVYQQLNLEACVIOEVG 120
Qy 129 MEETPLMNEDSLAAVKRYFORITLYLTERKXSPCAWVRAEIMRSISFSTNLQKILRRK 188
Db 121 VEETPLMNVDSILAAVKRYFORITLYLTERKXSPCAWVRAEIMRSISFSTNLQKILRRK 180
Qy 189 D 189
Db 181 E 181

RESULT 12
IVHUI6
Interferon alpha-I-16 precursor - human
N/Alternate names: HuIFN-alpha-16; Interferon alpha-I-WA; type I interferon
C/Species: Homo sapiens (man)
C/Date: 28-Dec-1987 #sequence_revision 28-Dec-1987 #text_change 09-Jul-2004
C/Accession: G23753; A22068; I73334
R/Henzo, K.; Brosius, J.; Fujisawa, A.; Fujisawa, J.I.; Haynes, J.R.; Hochstadt, J.; Kov
U. Mol. Biol. 185, 227-260, 1985
A/Title: Structural relationship of human interferon alpha genes and pseudogenes.
A/Reference number: A92916; MUID:86037205; PMID:4057246
A/Accession: G23753
A/Molecule type: DNA
A/Residues: 1-189 <RES>
A/Cross-references: UNIPROT:P05015; UNIPARC:UPI0000047763; GB:X02957; NID:932653; PIDN:
R/Torczynski, R.M.; Fukey, M.; Bollon, A.P.
Proc. Natl. Acad. Sci. U.S.A. 81, 6451-6455, 1984
A/Title: Human genomic library screened with 17-base oligonucleotide probes yields a nov
A/Reference number: A22068; MUID:86038533; PMID:6387705
A/Accession: A22068
A/Molecule type: DNA
A/Residues: 1-189 <DNA>
A/Cross-references: UNIPARC:UPI0000047763; GB:X02055; NID:9184620; PIDN:AAA52727.1; PID:
R/Gren, E.; Bezrin, V.M.; Jansone, I.; Tsimanis, A.; Vlashevsky, Y.; Apalons, U.
J. Interferon Res. 4, 609-617, 1984
A/Title: Novel human leukocyte interferon subtype and structural comparison of alpha int
A/Reference number: 156313; MUID:85056523; PMID:8548765
A/Accession: I73334
A/Status: preliminary; translated from GB/EMBL/DBJ
A/Molecule type: mRNA
A/Residues: 1-189 <RES>
A/Cross-references: UNIPARC:UPI0000047763; GB:M28585; NID:9184643; PIDN:AAA36042.1; PID:
C/Genetics:
A/Gene: GDB:IFNA16
A/Cross-references: GDB:136357; OMIM:147580
A/Map position: 9p22-9p22
A/Introns: #status absent
C/Superfamily: Interferon alpha
C/Keywords: antiviral; cytokine; leukocyte
F/1-33/Domain: signal sequence #status predicted <SIG>
F/24-189/Product: interferon alpha-I-16 #status predicted <MAT>
F/24-122,52-162/Diulfide bonds: #status predicted

Query Match 87.1%; Score 837; DB 1; Length 189;
Best Local Similarity 87.3%; Pred. No. 7.9e-67;
Matches 165; Conservative 9; Mismatches 15; Indels 0; Gaps 0;

Qy 1 MALSPSLMAVLYVSYKSIICSGCDLPQTHSLGNRRALLILAAQMGRIISPSCLKDRHDFG 60
Db 1 MALSPSLMAVLYVSYKSIICSGCDLPQTHSLGNRRALLILAAQMGRIISPSCLKDRHDFG 60
Qy 61 LPQEFDPNQFOKQAIISVLHEMIQOTFNLFTEDSSAAWESILKEFSTELVYQQLNLE 120
Db 61 LPQEFDPNQFOKQAIISVLHEMIQOTFNLFTEDSSAAWESILKEFSTELVYQQLNLE 120

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Qy 121 ACVIOEVMETPLMNEDSLAAVKRYFORITLYLTERKXSPCAWVRAEIMRSISFSTN 180
Db 121 ACVIOEVMETPLMNEDSLAAVKRYFORITLYLTERKXSPCAWVRAEIMRSISFSTN 180
Qy 181 LQKILRRKD 189
Db 181 LQKILRRKD 189

RESULT 13
I37584
IFN-alpha-N-protein - human
C/Species: Homo sapiens (man)
C/Date: 04-Oct-1996 #sequence_revision 04-Oct-1996 #text_change 09-Jul-2004
C/Accession: I37584
R/Gren, E.Y.; Bezrin, V.M.; Tsimanis, A.Y.; Apalton, U.R.; Vlashevskii, Y.I.; Jansone, I
A.; Lozha, V.P.; Kavan, V.M.; Efimov, V.A.; Sverdlov, E.D.
Dokl. Biochem. 269, 91-95, 1983
A/Title: A new type of leukocytic interferon.
A/Reference number: I37583
A/Accession: I37584
A/Status: preliminary; translated from GB/EMBL/DBJ
A/Molecule type: mRNA
A/Residues: 1-189 <RES>
A/Cross-references: UNIPROT:Q14618; UNIPARC:UPI0000072A39; EMBL:X00140; NID:932726; PIDN
C/Superfamily: interferon alpha

Query Match 86.0%; Score 826; DB 2; Length 189;
Best Local Similarity 86.2%; Pred. No. 7.5e-66;
Matches 163; Conservative 9; Mismatches 17; Indels 0; Gaps 0;

Qy 1 MALSPSLMAVLYVSYKSIICSGCDLPQTHSLGNRRALLILAAQMGRIISPSCLKDRHDFG 60
Db 1 MALSPSLMAVLYVSYKSIICSGCDLPQTHSLGNRRALLILAAQMGRIISPSCLKDRHDFG 60
Qy 61 LPQEFDPNQFOKQAIISVLHEMIQOTFNLFTEDSSAAWESILKEFSTELVYQQLNLE 120
Db 61 LPQEFDPNQFOKQAIISVLHEMIQOTFNLFTEDSSAAWESILKEFSTELVYQQLNLE 120
Qy 121 ACVIOEVMETPLMNEDSLAAVKRYFORITLYLTERKXSPCAWVRAEIMRSISFSTN 180
Db 121 ACVIOEVMETPLMNEDSLAAVKRYFORITLYLTERKXSPCAWVRAEIMRSISFSTN 180
Qy 181 LQKILRRKD 189
Db 181 LQKILRRKD 189

RESULT 14
IVHUN7
Interferon alpha-5 precursor - human
N/Alternate names: Interferon alpha-G
C/Species: Homo sapiens (man)
C/Date: 01-Sep-1981 #sequence_revision 29-Jan-1999 #text_change 09-Jul-2004
C/Accession: S43716; A01833
R/Henzo, K.; Brosius, J.; Fujisawa, A.; Fujisawa, J.I.; Haynes, J.R.; Hochstadt, J.; Kov
U. Mol. Biol. 185, 227-260, 1985
A/Title: Structural relationship of human interferon alpha genes and pseudogenes.
A/Reference number: A92916; MUID:86037205; PMID:4057246
A/Accession: S43716
A/Molecule type: DNA
A/Residues: 1-189 <RES>
A/Cross-references: UNIPROT:P01569; UNIPARC:UPI0000047760; EMBL:X02956; NID:932659; PIDN
R/Goeddel, D.V.; Leung, D.W.; Dull, T.J.; Gross, M.; Lawn, R.M.; McCandliss, R.; Seeburg
Nature 290, 20-26, 1981
A/Title: The structure of eight distinct cloned human leukocyte interferon cDNAs.
A/Reference number: A93249; MUID:81148795; PMID:6163083
A/Accession: A01833
A/Molecule type: mRNA
A/Residues: 57-189 <GCE>
A/Cross-references: UNIPARC:UPI0000141F44; GB:V00541; GB:J00213; NID:932718; PIDN:CAA238
A/Note: eight classes of interferon alpha clones were identified, this sequence is deriv
C/Genetics:

```

A:Gene: GDB:IFNA5  
 A:Cross-references: GDB:136362; OMIM:147565  
 A:Map position: 9p22-9p22  
 C:Superfamily: Interferon alpha  
 C:Keywords: antiviral; cytokine; leukocyte  
 F:1-23/Domain: signal sequence #status predicted <SIG>  
 F:24-189/Product: interferon alpha-5 #status predicted <MAT>

Query Match 85.4%; Score 821; DB 1; Length 189;  
 Best Local Similarity 82.5%; Pred. No. 2,1e-65;  
 Matches 156; Conservative 18; Mismatches 15; Indels 0; Gaps 0;

QY 1 MALSFSLMAVLYLSYKSIKSGCDLPQTHSIGNRRLITLAQMGRIKSPFSCDKDRHDFG 60  
 DB 1 MALPFLMALVLYLSYKSIKSGCDLPQTHSIGNRRLITLAQMGRIKSPFSCDKDRHDFG 60  
 QY 61 LPQEEFGNGFOKTOAISVLHEMIQQTENLFSTEDSSAAMEQSLLEKSTELVQOLNNLE 120  
 DB 61 FPQEEFGNGFOKTOAISVLHEMIQQTENLFSTEDSSAAMEQSLLEKSTELVQOLNNLE 120  
 QY 121 ACVIOEVMETPLMNEDSLIAVRKYFORITLYLEKYSPCAMEVVAEIMRSLSPSTN 180  
 DB 121 ACVIOEVMETPLMNEDSLIAVRKYFORITLYLEKYSPCAMEVVAEIMRSLSPSTN 180  
 QY 181 LQKILRRKD 189  
 DB 181 LQKILRRKE 189

## RESULT 15

IVHU14

Interferon alpha-I-14 precursor [validated] - human

N:Alternate names: HuIFN-alpha-I-14; lambda-2-h; type I interferon

C:Species: Homo sapiens (man)

C:Date: 01-Sep-1981 #sequence revision 01-Sep-1981 #text change 09-Jul-2004

C:Accession: A92916; A94255; B93249; PC2203; A01834; C23753

C:Henco: K.; Brosius, J.; Fujisawa, A.; Fujisawa, J.I.; Haynes, J.R.; Hochstadt, J.; Kov

J. Mol. Biol. 185, 227-260, 1985

A&gt;Title: Structural relationship of human interferon alpha genes and pseudogenes.

A:Reference number: A92916; MUID:86037205; PMID:4057246

A:Accession: A92916

A:Molecule type: DNA

A:Residues: 1-189 &lt;HEN&gt;

A:Cross-references: UNIPROT:P01570; UNIPARC:UPI00000541D5; GB:V00533; GB:V00215; NID:G32650; PIDN:C

R:Lawn, R.M.; Adelman, J.; Dull, T.J.; Gross, M.; Goeddel, D.; Ullrich, A.

Science 212, 1159-1162, 1981

A&gt;Title: DNA sequence of two closely linked human leukocyte interferon genes.

A:Reference number: A94255; MUID:81201124; PMID:6165082

A:Accession: A94255

A:Molecule type: DNA

A:Residues: 1-189 &lt;LAW&gt;

A:Cross-references: UNIPARC:UPI00000541D5; GB:V00533; GB:V00215; NID:G32635; PIDN:CAA237

R:Goeddel, D.V.; Leung, D.W.; Dull, T.J.; Gross, M.; Lawn, R.M.; McCandliss, R.; Seeburg

Nature 290, 20-26, 1981

A&gt;Title: The structure of eight distinct cloned human leukocyte interferon cDNAs.

A:Reference number: A93249; MUID:81148795; PMID:6163083

A:Accession: B93249

A:Molecule type: mRNA

A:Residues: 1-174,'F',176-189 &lt;GOB&gt;

A:Cross-references: UNIPARC:UPI0000047764; GB:V00542; GB:V00214; NID:G32720; PIDN:CAA238

A&gt;Note: a variant sequence differs from that shown in having 175-Phe, 182-Lys, and 184-G

R:Shirono, H.; Koga, J.; Uemura, H.; Matsuo, A.

Bioosci. Biotechnol. Biochem. 58, 1714-1715, 1994

A&gt;Title: Identification of glycosylated subtypes of interferon-alpha produced by human 1

A:Reference number: PC2203; MUID:95036878; PMID:7765487

A:Accession: PC2203

A:Molecule type: protein

A:Residues: 'X',25-43 &lt;SHI&gt;

A:Cross-references: UNIPARC:UPI000017365E

A:Experimental source: leukocyte

C:Genetics:

A:Gene: GDB:IFNA14

A:Cross-references: GDB:136356; OMIM:147579

A:Map position: 9p22-9p22  
 C:Superfamily: Interferon alpha  
 C:Keywords: antiviral; glycoprotein  
 F:1-23/Domain: signal sequence #status predicted <SIG>  
 F:24-189/Product: interferon alpha-I-14 #status experimental <MAT>  
 F:24-122,52-162/Disulfide bonds: #status predicted  
 F:25,95/Binding site: carbohydrate (Aen) (covalent) #status predicted

Query Match 84.6%; Score 813; DB 1; Length 189;  
 Best Local Similarity 83.1%; Pred. No. 1,1e-64;  
 Matches 157; Conservative 18; Mismatches 14; Indels 0; Gaps 0;

QY 1 MALSFSLMAVLYLSYKSIKSGCDLPQTHSIGNRRLITLAQMGRIKSPFSCDKDRHDFG 60  
 DB 1 MALPFLMALVLYLSYKSIKSGCDLPQTHSIGNRRLITLAQMGRIKSPFSCDKDRHDFG 60  
 QY 61 LPQEEFGNGFOKTOAISVLHEMIQQTENLFSTEDSSAAMEQSLLEKSTELVQOLNNLE 120  
 DB 61 FPQEEFGNGFOKTOAISVLHEMIQQTENLFSTEDSSAAMEQSLLEKSTELVQOLNNLE 120  
 QY 121 ACVIOEVMETPLMNEDSLIAVRKYFORITLYLEKYSPCAMEVVAEIMRSLSPSTN 180  
 DB 121 ACVIOEVMETPLMNEDSLIAVRKYFORITLYLEKYSPCAMEVVAEIMRSLSPSTN 180  
 QY 181 LQKILRRKD 189  
 DB 181 LQKILRRKD 189

Search completed: December 15, 2005, 13:38:53  
 Job time : 38 secs

GenCore version 5.1.6  
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## OM protein - protein search, using sw model

Run on: December 15, 2005, 13:30:55 ; Search time 48 Seconds  
(without alignments)  
325.535 Million cell updates/sec

Title: US-10-691-653-2

Perfect score: 961  
Sequence: 1 MALSFLIMAVLVLSYKSIK.....EIMRSLSFTNLQILRRKD 189

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

Issued Patents AA: \*  
1: /cgn2\_6/ptodata/1/iaa/5\_COMB.pep: \*  
2: /cgn2\_6/ptodata/1/iaa/6\_COMB.pep: \*  
3: /cgn2\_6/ptodata/1/iaa/H\_COMB.pep: \*  
4: /cgn2\_6/ptodata/1/iaa/PCNUS\_COMB.pep: \*  
5: /cgn2\_6/ptodata/1/iaa/RE\_COMB.pep: \*  
6: /cgn2\_6/ptodata/1/iaa/backfillset.pep: \*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	961	100.0	189	2	US-09-206-935-18 Sequence 18, Appl
2	961	100.0	189	2	US-09-206-936-18 Sequence 18, Appl
3	951	99.0	189	2	US-07-145-002B-37 Sequence 37, Appl
4	951	99.0	189	2	US-06-256-204C-37 Sequence 37, Appl
5	941	97.9	189	2	US-07-145-002B-30 Sequence 30, Appl
6	941	97.9	189	2	US-06-256-204C-30 Sequence 30, Appl
7	925	96.3	189	1	US-08-026-758-16 Sequence 16, Appl
8	921	95.8	189	2	US-09-889-035-3 Sequence 3, Appl
9	917	95.4	189	2	US-09-206-935-10 Sequence 10, Appl
10	917	95.4	189	2	US-09-206-935-15 Sequence 15, Appl
11	917	95.4	189	2	US-09-206-936-15 Sequence 15, Appl
12	917	95.4	189	2	US-07-145-002B-6 Sequence 6, Appl
13	917	95.4	189	2	US-07-145-002B-6 Sequence 6, Appl
14	917	95.4	189	2	US-07-145-002B-19 Sequence 19, Appl
15	917	95.4	189	2	US-06-256-204C-6 Sequence 6, Appl
16	917	95.4	189	2	US-06-256-204C-19 Sequence 19, Appl
17	911	94.8	189	2	US-09-487-792-7 Sequence 7, Appl
18	911	94.8	189	2	US-09-908-594-7 Sequence 7, Appl
19	910	94.7	189	1	US-08-026-758-1 Sequence 1, Appl
20	909	94.6	189	1	US-08-489-066A-2 Sequence 2, Appl
21	909	94.6	189	2	US-08-489-072A-2 Sequence 2, Appl
22	909	94.6	189	2	US-08-489-071A-2 Sequence 2, Appl
23	907	94.4	189	1	US-08-026-758-20 Sequence 20, Appl
24	905	94.2	189	1	US-08-026-758-11 Sequence 11, Appl
25	905	94.2	189	1	US-08-026-758-12 Sequence 12, Appl
26	892	92.8	189	1	US-08-026-758-13 Sequence 13, Appl
27	883.5	91.9	188	6	Patent No. 5510472-8

28	882	91.8	189	1	US-08-489-066A-3 Sequence 3, Appl
29	882	91.8	189	2	US-08-489-072A-3 Sequence 3, Appl
30	882	91.8	189	2	US-09-206-935-13 Sequence 13, Appl
31	882	91.8	189	2	US-08-489-071A-3 Sequence 3, Appl
32	882	91.8	189	2	US-09-206-936-13 Sequence 13, Appl
33	882	91.8	189	2	US-07-145-002B-32 Sequence 32, Appl
34	882	91.8	189	2	US-06-256-204C-32 Sequence 32, Appl
35	875	91.1	189	1	US-08-026-758-15 Sequence 15, Appl
36	870	90.5	189	1	US-08-026-758-14 Sequence 14, Appl
37	870	90.5	189	2	US-09-206-935-19 Sequence 19, Appl
38	870	90.5	189	2	US-09-206-936-19 Sequence 19, Appl
39	870	90.5	189	2	US-07-145-002B-12 Sequence 12, Appl
40	870	90.5	189	2	US-07-145-002B-22 Sequence 22, Appl
41	870	90.5	189	2	US-06-256-204C-12 Sequence 12, Appl
42	870	90.5	189	2	US-06-256-204C-22 Sequence 22, Appl
43	870	90.5	189	2	US-09-919-497-73 Sequence 73, Appl
44	858	89.3	189	1	US-08-026-758-17 Sequence 17, Appl
45	844	87.8	166	2	US-09-339-913B-77 Sequence 77, Appl

## ALIGNMENTS

```
RESULT 1
US-09-206-935-18
Sequence 18, Application US/09206935
Patent No. 629877
GENERAL INFORMATION:
APPLICANT: Chen, Jian
APPLICANT: Godowski, Paul
APPLICANT: Wood, William I.
APPLICANT: Zhang, Dong-Xiao
TITLE OR INVENTION: NOVEL TYPE I INTERFERONS
FILE REFERENCE: 11659.50US05
CURRENT APPLICATION NUMBER: US/09/206,935
EARLIER FILING DATE: 1998-12-07
EARLIER APPLICATION NUMBER: 60/084,045
NUMBER OF SEQ ID NOS: 24
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 18
LENGTH: 189
TYPE: PRT
ORGANISM: Homo sapiens
US-09-206-935-18

Query Match      100.0%; Score 961; DB 2; Length 189;
Best Local Similarity 100.0%; Pred. No. 6.7e-102;
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 MALSFLIMAVLVLSYKSIKGLCDLPQTHSLGNRRALLILAQNGRISPFSCLDKRDHFG 60
DB      1 MALSFLIMAVLVLSYKSIKGLCDLPQTHSLGNRRALLILAQNGRISPFSCLDKRDHFG 60

QY      61 LPOEPPGNOFOKTOATSVLHEMTQOTFNLFTSTEDSSAAWBSLLEKFTSLYQOANLLE 120
DB      61 LPOEPPGNOFOKTOATSVLHEMTQOTFNLFTSTEDSSAAWBSLLEKFTSLYQOANLLE 120

QY      121 ACVQEVGMETPLMNEDSLAVRKYFORITLVTEKKYSCFCAVEVRAEIMRSLSTSTN 180
DB      121 ACVQEVGMETPLMNEDSLAVRKYFORITLVTEKKYSCFCAVEVRAEIMRSLSTSTN 180

QY      181 LQKILRRKD 189
DB      181 LQKILRRKD 189

RESULT 2
US-09-206-936-18
Sequence 18, Application US/09206936A
Patent No. 6300475
GENERAL INFORMATION:
APPLICANT: Chen, Jian
```

APPLICANT: Wood, William I.  
TITLE OF INVENTION: No. 6300475e1 Inteferon  
FILE REFERENCE: P1224R1  
CURRENT APPLICATION NUMBER: US/09/206,936A  
CURRENT FILING DATE: 1998-12-07  
EARLIER APPLICATION NUMBER: US 60/067,897  
EARLIER FILING DATE: 1998-12-08  
NUMBER OF SEQ ID NOS: 22  
SEQ ID NO 18  
LENGTH: 189  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-206-936-18

Query Match 100.0%; Score 961; DB 2; Length 189;  
Best Local Similarity 100.0%; Pred. No. 6,7e-102;  
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MALSFSLMAVVLVSYSKISGCDLPQTHSLGNRRALILLAQMGRI SPFSCCLKDRHDFG 60  
DB 1 MALSFSLMAVVLVSYSKISGCDLPQTHSLGNRRALILLAQMGRI SPFSCCLKDRHDFG 60  
QY 61 LPOEFDDGNQFOKTOAIVLHEMIQOTFNLSTEDSSAAWQSLEKSTELVYQOLNMLE 120  
DB 61 LPOEFDDGNQFOKTOAIVLHEMIQOTFNLSTEDSSAAWQSLEKSTELVYQOLNMLE 120  
QY 121 ACVIOEVGMEETPLMNESSILAVRKYFORITLYLTEKYSPCAWEVVAEIMRSISFSTN 180  
DB 121 ACVIOEVGMEETPLMNESSILAVRKYFORITLYLTEKYSPCAWEVVAEIMRSISFSTN 180  
QY 181 LQKILRRKD 189  
DB 181 LQKILRRKD 189

RESULT 3  
US-07-145-002B-37  
Sequence 37, Application US/07145002B  
Patent No. 6482613  
GENERAL INFORMATION:  
APPLICANT: Goeddel, David V.  
APPLICANT: Pestka, Sidney  
TITLE OF INVENTION: MICROBIAL PRODUCTION OF MATURE HUMAN  
TITLE OF INVENTION: LEUCOCYTE INTERFERONS  
FILE REFERENCE: 1803-0088-999  
CURRENT APPLICATION NUMBER: US/07/145,002B  
CURRENT FILING DATE: 1989-01-19  
NUMBER OF SEQ ID NOS: 70  
SOFTWARE: FastSeq for Windows Version 3.0  
SEQ ID NO 37  
LENGTH: 189  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-07-145-002B-37

Query Match 99.0%; Score 951; DB 2; Length 189;  
Best Local Similarity 99.5%; Pred. No. 9,3e-101;  
Matches 189; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MALSFSLMAVVLVSYSKISGCDLPQTHSLGNRRALILLAQMGRI SPFSCCLKDRHDFG 60  
DB 1 MALSFSLMAVVLVSYSKISGCDLPQTHSLGNRRALILLAQMGRI SPFSCCLKDRHDFG 60  
QY 61 LPOEFDDGNQFOKTOAIVLHEMIQOTFNLSTEDSSAAWQSLEKSTELVYQOLNMLE 120  
DB 61 LPOEFDDGNQFOKTOAIVLHEMIQOTFNLSTEDSSAAWQSLEKSTELVYQOLNMLE 120  
QY 121 ACVIOEVGMEETPLMNESSILAVRKYFORITLYLTEKYSPCAWEVVAEIMRSISFSTN 180  
DB 121 ACVIOEVGMEETPLMNESSILAVRKYFORITLYLTEKYSPCAWEVVAEIMRSISFSTN 180  
QY 181 LQKILRRKD 189  
DB 181 LQKILRRKD 189

DB 181 LQKILRRKD 189

RESULT 4  
US-06-256-204C-37  
Sequence 37, Application US/06256204C  
Patent No. 6610830  
GENERAL INFORMATION:  
APPLICANT: Goeddel, David V.  
APPLICANT: Pestka, Sidney  
TITLE OF INVENTION: MICROBIAL PRODUCTION OF MATURE HUMAN  
TITLE OF INVENTION: LEUCOCYTE INTERFERONS  
FILE REFERENCE: 1803-0025-999  
CURRENT APPLICATION NUMBER: US/06/256,204C  
CURRENT FILING DATE: 1981-04-21  
NUMBER OF SEQ ID NOS: 85  
SOFTWARE: FastSeq for Windows Version 3.0  
SEQ ID NO 37  
LENGTH: 189  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-06-256-204C-37

Query Match 99.0%; Score 951; DB 2; Length 189;  
Best Local Similarity 99.5%; Pred. No. 9,3e-101;  
Matches 189; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MALSFSLMAVVLVSYSKISGCDLPQTHSLGNRRALILLAQMGRI SPFSCCLKDRHDFG 60  
DB 1 MALSFSLMAVVLVSYSKISGCDLPQTHSLGNRRALILLAQMGRI SPFSCCLKDRHDFG 60  
QY 61 LPOEFDDGNQFOKTOAIVLHEMIQOTFNLSTEDSSAAWQSLEKSTELVYQOLNMLE 120  
DB 61 LPOEFDDGNQFOKTOAIVLHEMIQOTFNLSTEDSSAAWQSLEKSTELVYQOLNMLE 120  
QY 121 ACVIOEVGMEETPLMNESSILAVRKYFORITLYLTEKYSPCAWEVVAEIMRSISFSTN 180  
DB 121 ACVIOEVGMEETPLMNESSILAVRKYFORITLYLTEKYSPCAWEVVAEIMRSISFSTN 180  
QY 181 LQKILRRKD 189  
DB 181 LQKILRRKD 189

RESULT 5  
US-07-145-002B-30  
Sequence 30, Application US/07145002B  
Patent No. 6482613  
GENERAL INFORMATION:  
APPLICANT: Goeddel, David V.  
APPLICANT: Pestka, Sidney  
TITLE OF INVENTION: MICROBIAL PRODUCTION OF MATURE HUMAN  
TITLE OF INVENTION: LEUCOCYTE INTERFERONS  
FILE REFERENCE: 1803-0088-999  
CURRENT APPLICATION NUMBER: US/07/145,002B  
CURRENT FILING DATE: 1989-01-19  
NUMBER OF SEQ ID NOS: 70  
SOFTWARE: FastSeq for Windows Version 3.0  
SEQ ID NO 30  
LENGTH: 189  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-07-145-002B-30

Query Match 97.9%; Score 941; DB 2; Length 189;  
Best Local Similarity 98.9%; Pred. No. 1,3e-99;  
Matches 187; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 MALSFSLMAVVLVSYSKISGCDLPQTHSLGNRRALILLAQMGRI SPFSCCLKDRHDFG 60  
DB 1 MALSFSLMAVVLVSYSKISGCDLPQTHSLGNRRALILLAQMGRI SPFSCCLKDRHDFG 60  
QY 61 LPOEFDDGNQFOKTOAIVLHEMIQOTFNLSTEDSSAAWQSLEKSTELVYQOLNMLE 120

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Db 61 LPOEEDGNOFOKTOAISVHEMIQQTFNLFSTEDSSAAMEOSILEKSTELYQOLNMLE 120
Qy 121 ACVIOEVMETPLMNEDSLAVRKYFORITLYLTKKYSPCAMEVVRABIMSLSFSTN 180
Db 121 ACVIOEVMETPLMNEDSLAVRKYFORITLYLTKKYSFSAWEVVRABIMSLSFSTN 180
Qy 181 LQKILRRKD 189
Db 181 LQKILRRKD 189

RESULT 6
US-06-256-204C-30
; Sequence 30, Application US/06256204C
; Patent No. 6610830
; GENERAL INFORMATION:
; APPLICANT: Pestka, Sidney
; APPLICANT: Pestka, Sidney
; TITLE OF INVENTION: MICROBIAL PRODUCTION OF MATURE HUMAN
; FILE REFERENCE: 1803-0025-999
; CURRENT FILING DATE: 1981-04-21
; NUMBER OF SEQ ID NOS: 85
; SOFTWARE: FASTSEQ for Windows Version 3.0
; SEQ ID NO 30
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-06-256-204C-30

Query Match 97.9%; Score 941; DB 2; Length 189;
Best Local Similarity 98.9%; Pred. No. 1.3e-99;
Matches 189; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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Db 1 MALSFSLMAVLYSYKISLGGDLPOTHSLGNRRALILIAQMGRISSPSCUKDRHDFG 60
Qy 61 LPOEEDGNOFOKTOAISVHEMIQQTFNLFSTEDSSAAMEOSILEKSTELYQOLNMLE 120
Db 61 LPOEEDGNOFOKTOAISVHEMIQQTFNLFSTEDSSAAMEOSILEKSTELYQOLNMLE 120
Qy 121 ACVIOEVMETPLMNEDSLAVRKYFORITLYLTKKYSFSAWEVVRABIMSLSFSTN 180
Db 121 ACVIOEVMETPLMNEDSLAVRKYFORITLYLTKKYSFSAWEVVRABIMSLSFSTN 180
Qy 181 LQKILRRKD 189
Db 181 LQKILRRKD 189

RESULT 7
US-08-026-758-16
; Sequence 16, Application US/08026758
; Patent No. 5780021
; GENERAL INFORMATION:
; APPLICANT: SOBEL, DOUGLAS O.
; TITLE OF INVENTION: A METHOD FOR TREATING AUTOIMMUNE
; DISEASES USING ALPHA-INTERFERON AND/OR BETA-INTERFERON
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: OBION, SPIVAK, MCCLELLAND, MAIER & NEUSTADT,
; STREET: 1755 S. Jefferson Davis Highway, Suite 400
; CITY: Arlington
; STATE: Virginia
; COUNTRY: U.S.A.
; ZIP: 22202
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
```

```
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/026,758
FILING DATE: 19930305
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: OBION, NO. 5780021man F.
REGISTRATION NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 1126-096-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 413-3000
TELEFAX: (703) 413-2220
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO: 16:
SEQUENCE CHARACTERISTICS:
LENGTH: 189 amino acids
TYPE: amino acid
TOPOLOGY: unknown
MOLECULE TYPE: protein
FEATURE:
NAME/KEY: Protein
LOCATION: 24..189
OTHER INFORMATION: /note= "IFN-alpha-f"
US-08-026-758-16

Query Match 96.3%; Score 925; DB 1; Length 189;
Best Local Similarity 97.4%; Pred. No. 8.9e-98;
Matches 184; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

Qy 1 MALSFSLMAVLYSYKISLGGDLPOTHSLGNRRALILIAQMGRISSPSCUKDRHDFG 60
Db 1 MALSFSLMAVLYSYKISLGGDLPOTHSLGNRRALILIAQMGRISSPSCUKDRHDFG 60
Qy 61 LPOEEDGNOFOKTOAISVHEMIQQTFNLFSTEDSSAAMEOSILEKSTELYQOLNMLE 120
Db 61 LPOEEDGNOFOKTOAISVHEMIQQTFNLFSTEDSSAAMEOSILEKSTELYQOLNMLE 120
Qy 121 ACVIOEVMETPLMNEDSLAVRKYFORITLYLTKKYSPCAMEVVRABIMSLSFSTN 180
Db 121 ACVIOEVMETPLMNEDSLAVRKYFORITLYLTKKYSPCAMEVVRABIMSLSFSTN 180
Qy 181 LQKILRRKD 189
Db 181 LQKILRRKD 189

RESULT 8
US-09-889-035-3
; Sequence 3, Application US/09889035
; Patent No. 6703225
; GENERAL INFORMATION:
; APPLICANT: KOJIMA, SHIN-ICHI
; APPLICANT: ASAKURA, AKIRA
; APPLICANT: FUTATSUGI, TETSUAKI
; APPLICANT: OKUDA, YUKI
; APPLICANT: SAGARA, SHINSUKE
; TITLE OF INVENTION: NOVEL INTERFERON-ALPHA
; FILE REFERENCE: 065369
; CURRENT APPLICATION NUMBER: US/09/889,035
; CURRENT FILING DATE: 2001-07-11
; PRIOR APPLICATION NUMBER: JP 11-5138
; PRIOR FILING DATE: 1999-01-12
; NUMBER OF SEQ ID NOS: 7
; SEQ ID NO 3
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-889-035-3

Query Match 95.8%; Score 921; DB 2; Length 189;
Best Local Similarity 95.8%; Pred. No. 2.6e-97;
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Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;
QY 1 MALSFSLMAVLVLSYKISCSIGCDLPQTHSLGNRRALILLAQWGRISPFSCLKDRHDFG 60
Db 1 MALSFSLMAVLVLSYKISCSIGCDLPQTHSLGNRRALILLAQWGRISPFSCLKDRHDFR 60
QY 61 LPOEFPGNQFOKQOALSVLHEMIQOTFNLFTSTEDSSAAWQSILKFKSTELYYOQNLNLE 120
Db 61 LPOEFPGNQFOKQOALSVLHEMIQOTFNLFTSTEDSSAAWQSILKFKSTELYYOQNLNLE 120
QY 121 ACVIOEVMETPLMNEDSLAVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSTN 180
Db 121 ACVIOEVMETPLMNEDSLAVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSTN 180
QY 181 LQKRLRRKD 189
Db 181 LQKRLRRKD 189

RESULT 9
US-09-206-935-10
; Sequence 10, Application US/09206935
; Patent No. 6299877
; GENERAL INFORMATION:
; APPLICANT: Chen, Jian
; APPLICANT: Godowski, Paul
; APPLICANT: Wood, William I.
; APPLICANT: Zhang, Dong-Xiao
; TITLE OF INVENTION: NOVEL TYPE I INTERFERONS
; FILE REFERENCE: 11669.50US05
; CURRENT APPLICATION NUMBER: US/09/206,935
; CURRENT FILING DATE: 1998-12-07
; EARLIER APPLICATION NUMBER: 60/084,045
; EARLIER FILING DATE: 1998-05-04
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 10
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-206-935-10

Query Match 95.4%; Score 917; DB 2; Length 189;
Best Local Similarity 95.8%; Pred. No. 7.3e-97;
Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;
QY 1 MALSFSLMAVLVLSYKISCSIGCDLPQTHSLGNRRALILLAQWGRISPFSCLKDRHDFG 60
Db 1 MALSFSLMAVLVLSYKISCSIGCDLPQTHSLGNRRALILLAQWGRISPFSCLKDRHDFG 60
QY 61 LPOEFPGNQFOKQOALSVLHEMIQOTFNLFTSTEDSSAAWQSILKFKSTELYYOQNLNLE 120
Db 61 LPOEFPGNQFOKQOALSVLHEMIQOTFNLFTSTEDSSAAWQSILKFKSTELYYOQNLNLE 120
QY 121 ACVIOEVMETPLMNEDSLAVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSTN 180
Db 121 ACVIOEVMETPLMNEDSLAVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSTN 180
QY 181 LQKRLRRKD 189
Db 181 LQKRLRRKD 189

RESULT 10
US-09-206-935-15
; Sequence 15, Application US/09206935
; Patent No. 6299877
; GENERAL INFORMATION:
; APPLICANT: Chen, Jian
; APPLICANT: Godowski, Paul
; APPLICANT: Wood, William I.
; APPLICANT: Zhang, Dong-Xiao
; TITLE OF INVENTION: NOVEL TYPE I INTERFERONS
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; FILE REFERENCE: 11669.50US05
; CURRENT APPLICATION NUMBER: US/09/206,935
; CURRENT FILING DATE: 1998-12-07
; EARLIER APPLICATION NUMBER: 60/084,045
; EARLIER FILING DATE: 1998-05-04
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 15
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-206-935-15

Query Match 95.4%; Score 917; DB 2; Length 189;
Best Local Similarity 95.2%; Pred. No. 7.3e-97;
Matches 180; Conservative 4; Mismatches 5; Indels 0; Gaps 0;
QY 1 MALSFSLMAVLVLSYKISCSIGCDLPQTHSLGNRRALILLAQWGRISPFSCLKDRHDFG 60
Db 1 MALSFSLMAVLVLSYKISCSIGCDLPQTHSLGNRRALILLAQWGRISPFSCLKDRHDFR 60
QY 61 LPOEFPGNQFOKQOALSVLHEMIQOTFNLFTSTEDSSAAWQSILKFKSTELYYOQNLNLE 120
Db 61 LPOEFPGNQFOKQOALSVLHEMIQOTFNLFTSTEDSSAAWQSILKFKSTELYYOQNLNLE 120
QY 121 ACVIOEVMETPLMNEDSLAVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSTN 180
Db 121 ACVIOEVMETPLMNEDSLAVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSTN 180
QY 181 LQKRLRRKD 189
Db 181 LQKRLRRKD 189

RESULT 11
US-09-206-936-10
; Sequence 10, Application US/09206936A
; Patent No. 6300475
; GENERAL INFORMATION:
; APPLICANT: Chen, Jian
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: No. 6300475e1 Interferon
; FILE REFERENCE: P1224r1
; CURRENT APPLICATION NUMBER: US/09/206,936A
; CURRENT FILING DATE: 1998-12-07
; EARLIER APPLICATION NUMBER: US 60/067,897
; EARLIER FILING DATE: 1998-12-08
; NUMBER OF SEQ ID NOS: 22
; SEQ ID NO 10
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-206-936-10

Query Match 95.4%; Score 917; DB 2; Length 189;
Best Local Similarity 95.8%; Pred. No. 7.3e-97;
Matches 181; Conservative 4; Mismatches 4; Indels 0; Gaps 0;
QY 1 MALSFSLMAVLVLSYKISCSIGCDLPQTHSLGNRRALILLAQWGRISPFSCLKDRHDFG 60
Db 1 MALSFSLMAVLVLSYKISCSIGCDLPQTHSLGNRRALILLAQWGRISPFSCLKDRHDFG 60
QY 61 LPOEFPGNQFOKQOALSVLHEMIQOTFNLFTSTEDSSAAWQSILKFKSTELYYOQNLNLE 120
Db 61 LPOEFPGNQFOKQOALSVLHEMIQOTFNLFTSTEDSSAAWQSILKFKSTELYYOQNLNLE 120
QY 121 ACVIOEVMETPLMNEDSLAVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSTN 180
Db 121 ACVIOEVMETPLMNEDSLAVRKYFORITLYLTEKKYSPCAWEVVAEIMRSLSFSTN 180
QY 181 LQKRLRRKD 189
Db 181 LQKRLRRKD 189
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RESULT 12
US-09-206-936-15
; Sequence 15, Application US/09206936A
; Patent No. 6300475
; GENERAL INFORMATION:
; APPLICANT: Chen, Jian
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: No. 6300475el Interferon
; FILE REFERENCE: P1224R1
; CURRENT APPLICATION NUMBER: US/09/206, 936A
; CURRENT FILING DATE: 1998-12-07
; EARLIER APPLICATION NUMBER: US 60/067, 897
; EARLIER FILING DATE: 1998-12-08
; NUMBER OF SEQ ID NOS: 22
; SEQ ID NO 15
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-206-936-15

Query Match          95.4%; Score 917; DB 2; Length 189;
Best Local Similarity 95.2%; Pred. No. 7.3e-97;
Matches 180; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 MALSFSILMAVLVSYSGSLGCDLPQTHSLGNRRALILIAQGRISPFSCCLKDRHDFG 60
DB 1 MALSFSILMAVLVSYSGSLGCDLPQTHSLGNRRALILIAQGRISPFSCCLKDRHDFR 60

QY 61 LPOEFPDGNQFOKQAQALSVLHEMIQOTFNLSTEDSSAAMEQSILLEKSTELVYQOLNLE 120
DB 1 POEFPDGNQFOKQAQALSVLHEMIQOTFNLSTEDSSAAMEQSILLEKSTELVYQOLNLE 120

QY 121 ACVQEVGMETPLMNEDSLAVRKYFORITLVYTEKYSPCAMEVVRARIMSLSPSTN 180
DB 121 ACVQEVGMETPLMNEDSLAVRKYFORITLVYTEKYSPCAMEVVRARIMSLSPSTN 180

QY 181 LQKLRKRD 189
DB 181 LQKLRKRD 189

RESULT 13
US-07-145-002B-6
; Sequence 6, Application US/07145002B
; Patent No. 6482613
; GENERAL INFORMATION:
; APPLICANT: Goeddel, David V.
; APPLICANT: Pestka, Sidney
; TITLE OF INVENTION: MICROBIAL PRODUCTION OF MATURE HUMAN
; FILE REFERENCE: 1803-0088-999
; CURRENT APPLICATION NUMBER: US/07/145, 002B
; CURRENT FILING DATE: 1989-01-19
; NUMBER OF SEQ ID NOS: 70
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 6
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-07-145-002B-6

Query Match          95.4%; Score 917; DB 2; Length 189;
Best Local Similarity 95.2%; Pred. No. 7.3e-97;
Matches 180; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 MALSFSILMAVLVSYSGSLGCDLPQTHSLGNRRALILIAQGRISPFSCCLKDRHDFG 60
DB 1 MALSFSILMAVLVSYSGSLGCDLPQTHSLGNRRALILIAQGRISPFSCCLKDRHDFR 60

QY 61 LPOEFPDGNQFOKQAQALSVLHEMIQOTFNLSTEDSSAAMEQSILLEKSTELVYQOLNLE 120
DB 1 POEFPDGNQFOKQAQALSVLHEMIQOTFNLSTEDSSAAMEQSILLEKSTELVYQOLNLE 120

QY 121 ACVQEVGMETPLMNEDSLAVRKYFORITLVYTEKYSPCAMEVVRARIMSLSPSTN 180
DB 121 ACVQEVGMETPLMNEDSLAVRKYFORITLVYTEKYSPCAMEVVRARIMSLSPSTN 180

QY 181 LQKLRKRD 189
DB 181 LQKLRKRD 189
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DB 61 LPOEFPDGNQFOKQAQALSVLHEMIQOTFNLSTEDSSAAMEQSILLEKSTELVYQOLNLE 120
QY 121 ACVQEVGMETPLMNEDSLAVRKYFORITLVYTEKYSPCAMEVVRARIMSLSPSTN 180
DB 121 ACVQEVGMETPLMNEDSLAVRKYFORITLVYTEKYSPCAMEVVRARIMSLSPSTN 180

QY 181 LQKLRKRD 189
DB 181 LQKLRKRD 189

RESULT 14
US-07-145-002B-19
; Sequence 19, Application US/07145002B
; Patent No. 6482613
; GENERAL INFORMATION:
; APPLICANT: Goeddel, David V.
; APPLICANT: Pestka, Sidney
; TITLE OF INVENTION: MICROBIAL PRODUCTION OF MATURE HUMAN
; FILE REFERENCE: 1803-0088-999
; CURRENT APPLICATION NUMBER: US/07/145, 002B
; CURRENT FILING DATE: 1989-01-19
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 19
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-07-145-002B-19

Query Match          95.4%; Score 917; DB 2; Length 189;
Best Local Similarity 95.2%; Pred. No. 7.3e-97;
Matches 180; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 MALSFSILMAVLVSYSGSLGCDLPQTHSLGNRRALILIAQGRISPFSCCLKDRHDFG 60
DB 1 MALSFSILMAVLVSYSGSLGCDLPQTHSLGNRRALILIAQGRISPFSCCLKDRHDFR 60

QY 61 LPOEFPDGNQFOKQAQALSVLHEMIQOTFNLSTEDSSAAMEQSILLEKSTELVYQOLNLE 120
DB 1 POEFPDGNQFOKQAQALSVLHEMIQOTFNLSTEDSSAAMEQSILLEKSTELVYQOLNLE 120

QY 121 ACVQEVGMETPLMNEDSLAVRKYFORITLVYTEKYSPCAMEVVRARIMSLSPSTN 180
DB 121 ACVQEVGMETPLMNEDSLAVRKYFORITLVYTEKYSPCAMEVVRARIMSLSPSTN 180

QY 181 LQKLRKRD 189
DB 181 LQKLRKRD 189

RESULT 15
US-06-256-204C-6
; Sequence 6, Application US/06256204C
; Patent No. 6610830
; GENERAL INFORMATION:
; APPLICANT: Goeddel, David V.
; APPLICANT: Pestka, Sidney
; TITLE OF INVENTION: MICROBIAL PRODUCTION OF MATURE HUMAN
; FILE REFERENCE: 1803-0025-999
; CURRENT APPLICATION NUMBER: US/06/256, 204C
; CURRENT FILING DATE: 1981-04-21
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 6
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-06-256-204C-6

Query Match          95.4%; Score 917; DB 2; Length 189;
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Best Local Similarity 95.2%; Pred. No. 7.3e-97;  
Matches 180; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY	1	MALSFSLMAVTVLSYKSI	CSIGCDLPQTHSIGNRRA	LILLAQMGRI	SPFSC	LKDRHDFG	60
Db	1	MALSFSLMAVTVLSYKSI	CSIGCDLPQTHSIGNRRA	LILLAQMGRI	SPFSC	LKDRHDFR	60
QY	61	LPOEFQDNQFOKTAISV	LHMIQOTFNLSTEDS	SAAMEOSL	EKFSTEL	YQQLN	120
Db	61	LPOEFQDNQFOKTAISV	LHMIQOTFNLSTEDS	SAAMEOSL	EKFSTEL	YQQLN	120
QY	121	ACVIOEVGMETPLMNED	SILAVRKYFORITL	YLTEKKYSP	CAMEVVR	RAIMRSL	180
Db	121	ACVIOEVGMETPLMNED	SILAVRKYFORITL	YLTEKKYSP	CAMEVVR	RAIMRSL	180
QY	181	LQKILRRKD	189				
Db	181	LQKILRRKD	189				

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